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Leicestershire County Council.

**ANNUAL
REPORT**

OF THE

Medical Officer of Health

FOR THE YEAR

1928

J. A. FAIRER, M.D., D.P.H.,
County Medical Officer.

6494°



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COUNTY HEALTH DEPARTMENT,

17 FRIAR LANE,

LEICESTER.

MR. CHAIRMAN AND GENTLEMEN,

In presenting my third Annual Report on the health of the county—the 31st of the series—I desire to call attention to salient features only.

The Vital Statistics show an estimated increase in the county population of 8,100 since last year. As the corresponding figure for 1927 was 4,000, the total estimated increase for the last two years is 12,100. This is largely due to the migration of city dwellers to houses recently built in the surrounding districts, particularly Wigston, Blaby and Oadby.

There is a slight increase in the County Birth Rate from 17.2 to 17.4; the rate for England and Wales has remained stationary.

In 1927 there were 3,294 deaths; in the year under review the total number was 3,059, a reduction of 235. The County Death Rate, therefore, has decreased from 11.6 to 10.5.

The outbreaks of Scarlet Fever and of Diphtheria which occurred during 1928 made heavy demands on the accommodation of the Isolation Hospitals. The average number of cases admitted to these hospitals for the last five years has been approximately 450 per annum; this year nearly 1,200 patients were admitted to hospital.

It is particularly gratifying to state that the total deaths from Zymotic diseases were only 69, i.e., 2 less than last year and 17 less than in 1926.

The Infant Mortality Rate for 1928, the lowest on record, is 55 per 1,000 births; the figure for England and Wales is 65. The nearest approach to this low rate was 58 in 1926, but the average figure for the past ten years was 68.

Full details are given in the Report of the work of the Infant Welfare Centres and Ante-Natal Clinics, and the beneficial results which have accrued in consequence of the enthusiastic efforts of Voluntary Committees, the Medical Staff, and the Health Visitors.

Increased demands have been made on the County Laboratory, and a steady improvement has occurred in the milk supply of the county as a result of bacteriological examinations.

Full particulars of the work accomplished during the year are given under each sub-section of my Report; my object in this introductory

letter is simply to record the most important advances during the year 1928.

In conclusion I should like to thank the Chairman and the members of the Public Health Committee for their support and assistance, and also all the members of my staff for their enthusiasm and zeal.

To Dr. Robinson, the Consulting Medical Officer, I wish to express my appreciation of his readiness to assist me in all matters of difficulty.

I am indebted to Dr. Coward for his contribution on Tuberculosis, and to Dr. Mackintosh for much valuable help in the compilation of my Report.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient Servant,

J. A. FAIRER,

County Medical Officer of Health.

THE COUNTY PUBLIC HEALTH AND HOUSING
COMMITTEE, 1928.

J. W. BLACK, Esq. (*Chairman*).

BASTARD, W.	MARTIN, Lt.-Col. R. E., C.M.G.
BRIERS, A. J.	(<i>ex-officio</i>).
BROUGHTON, A. H.	POCHIN, V.R. (<i>ex-officio</i>).
FORSELL, J. T.	RIPPIN, W. H.
FULLER, B.	STUBBS, W.
GOODACRE, C.	TANDY, E. W.
HUBBARD, B.	TIMMS, R. (<i>Vice-Chairman</i>).
JACQUES, J. T.	WARD, G.
KINTON, G.	WHITWELL, H. J.
LEVERS, G. T.	WILSON, C.
	WRIGHT, W. H.

J. A. GOODMAN.

MATERNITY AND CHILD WELFARE COMMITTEE.

This Committee consists of the whole of the members of the Public Health and Housing Committee, with the addition of the following Ladies :—

Mrs. A. SHIRLEY ATKINS.
Mrs. E. E. BUCKINGHAM.
Mrs. S. M. JOYCE.
Hon. Mrs. MURRAY-SMITH.
Mrs. F. T. PILKINGTON.

OFFICERS OF THE MEDICAL DEPARTMENT.

T. ROBINSON, M.R.C.S., L.R.C.P., D.P.H. (Camb.).
Consulting Medical Officer.

J. A. FAIRER, M.D., D.P.H.,
County Medical Officer.
School Medical Officer.
Administrative Officer for Tuberculosis and Maternity and
Child Welfare.

N. A. COWARD, O.B.E., M.D., D.P.H.
Senior Assistant County Medical Officer
Clinical Tuberculosis Officer.
Senior Medical Officer for Maternity and Child Welfare.

J. M. MACKINTOSH, M.A., M.D., D.P.H.,
Assistant County Medical Officer.
Senior Assistant School Medical Officer.

S. E. MURRAY, M.B., B.S., L.M.S.S.A.,
Assistant School Medical Officer.

J. B. DALTON, M.B., Ch.B.,
Assistant School Medical Officer.
Medical Officer for Venereal Diseases.

MARY E. WESTON, M.B., B.S. (Lond.).
Assistant Infant Welfare Officer.
Assistant School Medical Officer.

G. G. BUCHANAN, M.B., Ch.B., D.P.H.
Assistant Tuberculosis Officer.

CONSTANCE WALTERS., B.Sc., M.B., B.Ch.,
Assistant Infant Welfare Officer.
County Oculist.

DENTAL STAFF:

P. ASHTON, L.D.S., Chief Dental Surgeon.
A. E. WARD, L.D.S. } Assistant Dental
S. H. BRENAN, L.D.S. } Surgeons.

All the above are Full-time Officers of the County Council.

Dr. Coward and Dr. Mackintosh devote one-quarter of their time to Maternity and Child Welfare Work, Dr. Weston one-third and Dr. Walters one-half.

HEALTH VISITORS:

* Mrs. A. Warren, S.R.N. (Superintendent).	
Mrs. A. D. Antrobus, S.R.N.	Miss G. I. Carryer, S.R.N.
Miss A. J. Bailey, S.R.N.	Miss M. A. Dilworth, S.R.N.
*Miss G. Bennett, S.R.N.	Mrs. E. A. Dollman, S.R.N.
Mrs. S. J. Bourne, S.R.N.	Miss L. Fox, S.R.N.
Mrs. P. Brunsdon, S.R.N.	Miss T. M. Griffiths, S.R.N.
*Mrs. M. J. Brunt, S.R.N. (Resigned).	Miss M. A. Hunt, S.R.N. *Miss K. A. Marsh, S.R.N.
*Miss G. E. Butler, S.R.N.	Miss E. H. Seabrook.
*Mrs. F. E. M. Cade.	Miss W. A. Simmons, S.R.N. Mrs. E. E. Wright, S.R.N.

Those marked * hold the Certificate of Sanitary Inspector.

All the above are fully trained Nurses and hold the Certificate of the Central Midwives Board. The Superintendent also holds

the Child Welfare Workers' Certificate, and Miss G. E. Butler has the Health Visitors' Certificate of the Ministry of Health.

The Offices of the Health Department are divided into four main sections :—

General, and Maternity and Child Welfare Department :

Chief Clerk (Mr. H. Burditt) and five assistants.

Tuberculosis :

Chief Clerk (Mr. H. Collington) and three assistants.

School Medical Service :

Chief Clerk (Mr. W. A. Thornton) and two assistants. There are also three assistants in the Dental Department.

Laboratory :

Assistant Bacteriologist (Mr. J. N. Graham) with one junior assistant.

REPORT.

STATISTICS AND SOCIAL CONDITIONS OF COUNTY.

		Urban	39,915
Area (in acres)	524,197	Rural	484,282
Population (Census 1921)			260,326
," (Estimated 1928)			291,800
	(Urban 120,410. Rural 171,390)		
Number of Inhabited Houses (1921)			58,849
Number of Families or Separate Occupiers (1921)			60,560
Rateable Value and sum represented by a Penny Rate		£1,581,243	
		£6,668	

STATISTICS AND SOCIAL CONDITIONS OF COUNTY.

No hard and fast geographical line can be drawn to separate the Administrative County into occupational groups. The North-West area forms a fairly compact mining district, but large numbers of the younger members of its population travel to Leicester daily, and are engaged in factory work. The mining district as a whole suffered from the Coal stoppage of 1926, and the signs of recovery are slow and uncertain. Unemployment and distress are reflected in defective nutrition among the children.

The industrial districts are grouped mainly around the City of Leicester, the Soar Valley, and the congeries of villages in the South-West which cluster around the town of Hinckley. The remainder of the County, the greater part of which consists of a wide stretch of upland East of the Soar Valley, is chiefly agricultural.

A priori considerations would suggest that in industrial districts, such as Hinckley, the absence of the mother from her home during the day might lead to a higher rate of infant mortality and to defective nutrition among older children from want of a carefully prepared hot mid-day meal. The evidence which has been collected lends no support to this suggestion. The employment of parents in factories is not in itself a primary cause of malnutrition in children, or of a higher death rate among infants. It is of some significance that the infant mortality rate for Hinckley for the current year is only 30.5 per 1,000 births.

EXTRACT FROM THE VITAL STATISTICS OF THE YEAR.

		Total.	Males.	Females.
Births	Legitimate	4,882	2,519	2,363
	Illegitimate	192	102	90
	Total Births	5,074	2,621	2,453

Birth Rate per 1,000 of population 17.4.

Deaths 3,059. Death Rate 10.5.

Number of women dying in, or in consequence of, childbirth :—
Sepsis 12; other causes 12.

Deaths of infants under one year of age per 1,000 births :—Legitimate 52.8; Illegitimate 119.8. Total rate per 1,000—55.4.

Deaths from Measles (all ages) 15; Whooping Cough (all ages) 5; Diarrhoea (under 2 years) 21.

INFANT MORTALITY.

The Infant Mortality rate for 1928 has reached the record low figure of 55. The nearest approach to this was in 1926, when a rate of 58 was recorded. I am glad to report that a new record rate of 65 has been established for England and Wales. Those who count the blessings of the year 1928 will not readily forget two which no doubt had profound influence on the prevention of infant deaths—the long sunlit Summer and the relative freedom from respiratory diseases which accompanied it. Earnest workers in the field of Protection of Infant Life have good cause to be proud of the steadily declining rate of Infant Mortality throughout the County, but it is distressingly evident that the cognate problem of the protection of motherhood requires closer study.

INFANT MORTALITY.

YEAR.	URBAN.		RURAL.		WHOLE COUNTY		Rate for England and Wales.
	No.	Rate.	No.	Rate.	No.	Rate.	
1924	151	68	158	54	309	60	75
1925	147	71	201	71	348	71	75
1926	133	65	151	53	284	58	70
1927	136	66	182	64	318	65	68
1928	112	55	169	56	281	55	55

DEATHS.

The seven chief causes of death in 1928 are Heart Disease, 16.3% of the total deaths; Cancer 11.6%; Phthisis 6.6%; Cerebral Haemorrhage 6.3%; Arterio-Sclerosis 5.5%; Bronchitis 4.7%; and Congenital Debility 4.4%.

The notable feature of these statistics is the relatively unimportant part played by Influenza and Pneumonia and the respiratory diseases generally. Last year both Influenza and Pneumonia were reported among the seven chief causes, and Bronchitis accounted for 6.9% of the total deaths. This change of position is largely accounted for by the fact that the climatic conditions during the year were unfavourable to infections of the respiratory tract. It is no doubt for the same reason that the total Death Rate for the County has decreased from 11.6 in 1927 to 10.5, which is well below the average for the present quinquennium.

DEATHS.

YEAR	URBAN.		RURAL.		WHOLE COUNTY		Rate for England and Wales
	Net No. Registered	Rate	Net No. Registered	Rate	Net No. Registered	Rate	
1924	1333	11.74	1857	11.64	3190	11.68	12.2
1925	1319	11.57	1808	11.26	3127	11.39	12.2
1926	1196	10.35	1750	10.66	2946	10.53	11.6
1927	1351	11.45	1943	11.79	3294	11.61	12.3
1928	1186	9.88	1873	10.89	3059	10.48	11.7

ZYMOTIC DEATHS.

It is a very remarkable fact that in spite of the widespread epidemics of infectious diseases, notably Scarlet Fever and Diphtheria, which occurred during the year, the number of Zymotic deaths is actually lower than it has been since 1924. The total number of deaths is 69, giving a Rate of 0.23.

ZYMOTIC DEATHS.

YEAR	URBAN.		RURAL.		WHOLE COUNTY.	
	No.	Rate.	No.	Rate.	No.	Rate.
1924	30	0.3	35	0.2	65	0.2
1925	74	0.7	56	0.4	130	0.5
1926	43	0.37	43	0.26	86	0.31
1927	30	0.25	41	0.25	71	0.25
1928	23	0.19	46	0.27	69	0.23

BIRTH RATE.

Last year I reported that the Birth Rate had fallen steadily each year since 1920. However, this year although the Rate for England and Wales has remained stationary the County Rate has slightly increased, viz., from 17.2 to 17.4. Of the births recorded 2,621 were males and 2,453 were females, i.e., 107 males to 100 females.

This proportion was 106 and 109 respectively in 1926 and 1927. This higher ratio of male to female births for the last three years is rather exceptional as the average of the ten years previous to 1926 was 104 males and 100 females. As previously noted in 1927 there is a much higher proportion of male to female births amongst the illegitimate children. Last year the Ratio was 108 males to 100 females; this year it is even higher, viz., 113 to 100.

GENERAL PROVISION OF HEALTH SERVICES.

Summary of the Public Health Services Available in the County.

The following information has been compiled for the purpose of reference; it is hoped that in this summary form it may be found useful to General Practitioners and others who are interested in the progress of preventive medicine and desire to know what facilities are provided by the County Council in connection with Public Health administration.

(1) COUNTY MEDICAL OFFICER.

The County Medical Officer is required to act as consultant on all matters relating to the Public Health Services undertaken by the County Council; in this capacity he will be pleased to advise on any question affecting the health of the County no matter from what source the difficulty may arise. He is anxious to promote co-operation between the County Health Department and the District Medical Officers of Health through the medium of regular exchange of information on matters affecting or likely to affect Public Health. When he intends to visit any district for the purpose of inspection or inquiry he will, whenever practicable, send previous notice of his visit to the District Medical Officer of Health.

(2) THE COUNTY HEALTH DEPARTMENT.

The County Medical Officer is the administrative head of all Departments. All communications relating to any subject connected with the Health of the County, including Sanitation, Tuberculosis, School Medical Service, Maternity and Child Welfare, Midwifery, Nursing, etc., should be addressed to the County Medical Officer, 17, Friar Lane, Leicester. Telegrams: "Isolate, Leicester." Telephone: Leicester 20143.

As it may be necessary in case of urgency to refer to separate Departments of the Health Service, a list of these is set down below for reference:—

(a) GENERAL OFFICES:

17, Friar Lane, Leicester.

The County Medical Officer (Dr. J. A. Fairer).

Private Address: "Lyndhurst," Knighton Rise, Leicester.
Home Telephone Number: Leicester 7548.

Senior Assistant County Medical Officer (Dr. N. A. Coward).

Private Address : "Littleham," Groby Road, Leicester.
Home Telephone Number : Anstey 91.

Assistant County Medical Officer (Dr. J. M. Mackintosh).

Home Address : "Kenilworth," Stoneygate Road, Leicester.
Home Telephone Number : Leicester 77650.

Chief Clerk : Mr. H. Burditt, 17, Friar Lane, Leicester.

(b) ISOLATION OF INFECTIOUS DISEASES.

Medical Adviser :—The County Medical Officer, to whom all general questions relating to the administration of Isolation Hospitals should be referred.

All urgent communications, e.g., relating to the admission of cases of infectious disease to Isolation Hospitals should be addressed to—

The Clerk of the Isolation Hospitals Committee (Mr. J. Baylis), 17, Friar Lane, Leicester.

Office Telephone Number : Leicester 59302.
Home Telephone Number : Leicester 7616.

(c) TUBERCULOSIS DEPARTMENT :

Clinical Tuberculosis Officer (Dr. N. A. Coward).

Chief Clerk : Mr. H. Collington, 17, Friar Lane, Leicester.

(d) SCHOOL MEDICAL SERVICE :

Senior Assistant Medical Officer (Dr. J. M. Mackintosh).

Chief Dental Officer : Mr. P. Ashton, 17, Friar Lane, Leicester.

Chief Clerk : Mr. W. A. Thornton, 17, Friar Lane, Leicester.

(e) MATERNITY AND CHILD WELFARE; MIDWIFERY AND NURSING SERVICES :

The County Medical Officer and his Senior Assistants.

(f) *Puerperal Infection and Maternity Mortality :*

Dr. J. M. Mackintosh.

(g) *Superintendent Health Visitor* :

Mrs. A. Warren.

(h) **BACTERIOLOGICAL LABORATORY** :

The County Medical Officer.

Assistant Bacteriologist

Mr. J. N. Graham.

The following is a summary of the Health Services organised by the various Departments :—

(1) **SCHOOL MEDICAL SERVICE** :

(a) **Minor Ailments.**

Clinics for the treatment of minor ailments, *e.g.*, Ringworm, Scabies, and other chronic skin ailments, minor affections of the eyes and ears, etc., have been provided for at the following Centres :—

LEICESTER :—County Health Department, 17, Friar Lane, Leicester, every Saturday from 10 a.m. to 12 noon. Cases seen by appointment only.

COALVILLE :—Primitive Methodist Schoolroom, Tuesdays and Fridays, from 10 a.m. to 12 noon. A School Medical Officer attends on Tuesdays.

HINCKLEY :—Mission Room. Held every Tuesday from 10 a.m. to 12 noon. A School Medical Officer attends every Session.

MELTON MOWBRAY :—Town Hall. Wednesdays and Fridays, from 10 a.m. to 12 noon. A School Medical Officer attends on Wednesdays.

(b) **Orthopædic Treatment.**

(1) *Clinics* :

All applications for Orthopædic treatment should be made in the first instance to the County Medical Officer, by whom the necessary arrangements will be made. The following Clinics work in co-operation with the Health Department :—

LEICESTER ROYAL INFIRMARY :—Daily by arrangement.

LOUGHBOROUGH CRIPPLES' GUILD :—Packe Street, Loughborough. Daily by arrangement.

COALVILLE ORTHOPÆDIC CLINIC:—Primitive Methodist Schoolroom, Marlborough Square, Coalville. Mondays, Wednesdays, and Fridays at 2.30 p.m.

(2) *Institutional Treatment:*

School children requiring Surgical treatment are selected by the Surgeons attending the Orthopædic Clinics. Each case is referred to the Medical Inspection Committee of the County Council for consideration. Free treatment is granted to necessitous cases, and others are required to contribute towards the cost of treatment according to their means.

The Warwickshire Orthopædic Hospital, Coleshill, and Manfield Orthopædic Hospital, Northampton, have been approved as Hospital Schools by the Board of Education, and are available for cases admitted from the Northern and Southern districts of Leicestershire respectively.

(3) *Surgical and Corrective Apparatus:*

All applications for the provision of Splints, &c., to be addressed to the County Medical Officer, who refers each case to the appropriate Committee for consideration.

(c) *Dental Service.*

The School Dentists visit the Schools for the purpose of treating the school children between the ages of 5 and 14 years. A Clinic is held at 17, Friar Lane, Leicester, on Saturday mornings for school children from the surrounding villages requiring urgent treatment by special appointment only.

(d) *Institutional and Operative Treatment:*

(i) *Adenoids and Enlarged Tonsils.*

Arrangements have been made whereby the operative treatment of children suffering from these conditions is carried out by the Staff of the various Local Hospitals. For children living near Leicester this work is undertaken at the Leicester City Clinic, Richmond House, The Newarkes, and not at the Royal Infirmary.

The fee for operation may be partly or wholly remitted in necessitous cases.

Parents whose children are recommended by their private practitioners for operation, should communicate with the County Medical Officer.

(ii) *Ringworm.*

X-Ray treatment for Ringworm of the Scalp is available at the Leicester City Clinic at a cost of twenty-five shillings for the complete course. Inquiries should be addressed to the County Medical Officer.

(e) Defective Vision.

Free Ophthalmic examination is provided by the County Council for Elementary School children. Arrangements have also been made for the provision of spectacles at reduced prices, and in necessitous cases financial assistance is given through the Defective Children Sub-Committee.

Routine examinations by refraction are carried out at the County Schools, but the School Oculist conducts a Clinic for urgent cases at the County Offices every Saturday morning by appointment only.

(f) Physically and Mentally Defective Children.

Institutional treatment is available for low grade cases of Mental Deficiency, and to a small extent for other types.

Educational provision in special schools or classes is made for Blind and Deaf children, and for suitable cases of Epilepsy.

(g) School Closure.

Schools may be closed in the interests of the public health by the local Sanitary Authority or any two members thereof acting on the advice of their Medical Officer of Health. The practice generally adopted, however, is for the District Medical Officer of Health to notify such closures to the Chief School Medical Officer who issues a confirming order.

(2) MATERNITY AND CHILD WELFARE.

(a) Infant Welfare Centres.

The following is a list of the Infant Welfare Centres in the County :

Centre.	Day.	Time.
Anstey.	2nd and 4th Mondays.	2.30 p.m.
Asfordby.	2nd and 4th Thursdays.	2.30 p.m.
Ashby-de-la-Zouch.	Thursdays.	2.30 p.m.
Barrow-on-Soar.	2nd and 4th Wednesdays.	2.45 p.m.
Barwell.	2nd and 4th Thursdays.	2.30 p.m.
Birstall.	2nd and 4th Wednesdays	2.30 p.m.
Blaby.	1st and 3rd Tuesdays	2.15 p.m.
Bottesford.	2nd and 4th Wednesdays	1.45 p.m.
Coalville.	Tuesdays.	2.30 p.m.
Cosby.	1st and 3rd Wednesdays.	2.30 p.m.
Desford.	1st and 3rd Thursdays.	2 p.m.
Earl Shilton.	1st and 3rd Thursdays.	2.45 p.m.
Enderby.	1st and 3rd Wednesdays.	2 p.m.

Evington.	1st Thursdays.	2.30 p.m.
Fleckney.	2nd and 4th Thursdays.	2.30 p.m.
Glenfield.	2nd and 4th Wednesdays.	2.30 p.m.
Hinckley.	Tuesdays.	2.30 p.m.
Humberstone.	1st and 3rd Wednesdays.	2.30 p.m.
Ibstock.	2nd and 4th Thursdays.	2.30 p.m.
Kibworth.	2nd and 4th Wednesdays	2.30 p.m.
Lubbesthorpe.	1st and 3rd Mondays.	2.30 p.m.
Lutterworth.	1st and 3rd Thursdays.	2.30 p.m.
Measham.	Mondays.	2.30 p.m.
Melton Mowbray.	Wednesdays.	2 p.m.
Moira and Donisthorpe.	Wednesdays.	2.30 p.m.
Mountsorrel.	Tuesdays.	2.30 p.m.
Narborough.	2nd and 4th Thursdays.	2.30 p.m.
Oadby.	2nd and 4th Wednesdays.	2.45 p.m.
Quorn	Wednesdays.	2.30 p.m.
Rearsby.	1st and 3rd Tuesdays.	2.30 p.m.
Rothley.	1st and 3rd Mondays.	2.30 p.m.
Shackerstone.	1st and 3rd Tuesdays.	2.30 p.m.
Shepshed.	1st and 3rd Wednesdays.	2.30 p.m.
Sileby.	Tuesdays.	2.45 p.m.
South Wigston.	2nd and 4th Tuesdays.	2.30 p.m.
Stathern.	1st and 3rd Mondays.	2.30 p.m.
Syston.	Mondays.	2.30 p.m.
Thurmaston.	Tuesdays.	2.30 p.m.
Whetstone.	2nd and 4th Tuesdays	2.30 p.m.
Whitwick.	Mondays.	2.30 p.m.
Wigston Magna.	2nd and 4th Thursdays.	2.30 p.m.

(b) Nutrition of the Mother.

Grants of milk are given to necessitous expectant and nursing mothers on a Health Visitor's report, subject to consideration by the Maternity and Child Welfare Committee.

(c) Ante-Natal Supervision.

This work is chiefly carried out by the County Health Visitors either at the Infant Welfare Centres or by home visiting. Application should be made to the County Medical Officer, County Health Department, 17, Friar Lane, Leicester, or, in a district where an Infant Welfare Centre exists, to the Hon. Secretary of the Centre. Ante-Natal Clinics have been opened at the Y.M.C.A. Hut, Station Road, Hinckley, and the Co-operative Hall, Wigston Magna. The Clinic at Hinckley is held on the first Monday in the month at 2.30 p.m. and at Wigston Magna on

the second Friday in the month at 2.30 p.m. Cases requiring treatment are referred to their own Doctor. It is hoped to institute Clinics in other suitable districts in the near future.

(d) Maternity Home and Hospital Accommodation.

(i) Nursing Homes.

Inspections for registration and subsequent supervision of Nursing (including Maternity) Homes is carried out by the Officers of the County Health Department.

(ii) Maternity Hospital.

Arrangements have been made with the Leicester and Leicestershire Maternity Hospital, Causeway Lane, Leicester, whereby up to 25 cases per annum can be admitted. Applications for admission for complicated cases of confinement or where the home conditions are unsuitable, should be made to the County Medical Officer.

An expectant mother living in South Leicestershire who wishes to be admitted to the Warwickshire Maternity Home, Hilmorton Road, Rugby, should apply to the County Medical Officer, Leicester, the cost of confinement, etc., being determined by the Maternity and Child Welfare Committee, according to the intending patient's financial circumstances.

(iii) Hostel—Unmarried Mothers.

Arrangements have been made to admit suitable cases to St. Saviour's Home, Northampton. It is required that the mother and child should stay in the Home for at least six months. An endeavour is then made to obtain work for the mother.

(iv) Convalescent Home Treatment for Nursing Mothers.

A limited sum has been provided for sending suitable cases to a Convalescent Home where accommodation can be obtained.

(e) Infant Treatment.

(i) Convalescent Homes.

Arrangements have been made with the Children's Convalescent Home, Woodhouse Eaves, to receive children requiring treatment between the ages of 3 and 5 years.

(ii) Nutrition of Infants.

Grants of milk are given to necessitous children requiring extra nourishment up to the age of 5 years, on a Health Visitor's report, subject to the approval of the Maternity and Child Welfare Committee.

(iii) *Orthopædic Treatment.*

Orthopædic treatment of non-tuberculous children under the age of 5 years living in North Leicestershire is given at Loughborough Out-patient Clinic and at the Orthopædic Clinic, Coalville.

Necessitous cases are granted free treatment, and other cases are required to contribute towards the cost of treatment according to their means.

In-patient treatment is provided at the Warwickshire Orthopædic Hospital, Coleshill, and at Manfield Hospital, Northampton.

(iv) *Ophthalmia Neonatorum.*

On receipt of a copy of a notification from a District Medical Officer of Health, the Health Visitor for the respective district is instructed to visit immediately and report on the case. Subsequent visits are made as required.

(f) *Midwifery Service.*

This service is carried out by the Leicestershire County Nursing Association for the Leicestershire County Council.

Certified Midwives are provided in necessitous cases, viz. :—

(a) For women who are not able to obtain the services of a Midwife locally.

(b) For districts where there is no Certified Midwife.

Applications either for the services of a Midwife or for the formation of a District should be made to the Superintendent, County Nursing Association, Highfield Street, Leicester. (Telephone No. 59859).

(a) *A Grant* (not exceeding £21 per annum) is made annually to a District Nursing Association where the Nurse does Midwifery work in her area, and the position is regarded as necessitous.

A grant for initial expenses, not exceeding £14, may also be made.

(b) *Subsidies.*

Subsidies not exceeding £21 per annum are made to Midwives either through the County Nursing Association or a District Nursing Association, who practise independently in a "Necessitous" district.

(c) *Sparsely Populated Associations.*

Special arrangements may be made for giving grants to sparsely populated Associations, and in the past grants amounting to £78 per annum have been given with a grant of £6 per annum bicycle allowance, and £7 for initial expenses.

(d) *Milage Grants.*

Grants, according to distance, are given to Midwives who take Midwifery cases outside their usual area of practice.

(e) *Placing Midwives.*

In respect of each Midwife newly-appointed by the Leicestershire County Nursing Association, whether to fill a vacancy or to serve in an area hitherto unprovided for, a grant of £30 is made by the County Council to the Association.

(f) *Midwifery Scholarships.*

A limited sum is provided for Midwifery Scholarships. The selection of candidates and arrangements for training are carried out by the County Nursing Association; application should be made to the Secretary.

(g) *Lectures.*

Lectures to practising Midwives are given annually at various Centres in the County.

(h) *Post Graduate Courses.*

Provision is made for Post-graduate Courses for practising Midwives at Institutions approved by the Ministry of Health, and a grant of £10 is made by the County Council towards the expenses incurred, in addition to any grant paid by the Ministry of Health direct to the Training Institution.

(g) *Midwives Acts.*

(i) *Doctors' Fees.*

The Ministry of Health has fixed a scale of fees payable by the County Council to Medical Practitioners who are called in by Midwives, on condition that a claim is submitted to the County Medical Officer within two months of the date of the visit to the patient.

The Committee will endeavour to recover the fees so paid, according to the income of the person liable, after full investigation of the financial circumstances has been made.

(ii) *Doctors' Services.*

Where a Certified Midwife is not engaged and the services of a Doctor are required, his fees will be paid by the County Council. These fees will be subsequently recovered where circumstances permit.

(h) Notification of Births Acts.

Notifications of Births, with the exception of those occurring in Loughborough Municipal Borough and Market Harborough Urban District, must be made to the County Medical Officer within 36 hours of the birth. A supply of cards and envelopes for this purpose will be despatched on application.

The County Health Visitors visit for the purpose of giving advice as to the feeding and care of the infants. Subsequent visits are made as required until the child reaches the age of five years.

(i) Puerperal Fever and Puerperal Pyrexia.

On receipt of a copy of a notification from a District Medical Officer of Health, the Health Visitor for the respective district is instructed to visit immediately and report on the case. Subsequent visits are made as required.

(N.B.—A free supply of Anti-streptococcal Serum can be obtained by a Medical Practitioner from Loughborough General Hospital, or Mr. F. W. Goodess, Market Street, Leicester, providing that the case is immediately reported to the County Medical Officer, and that he furnishes a certificate stating the case is necessitous. The Maternity and Child Welfare Committee must be satisfied that the cost of the Serum cannot be recovered from the husband or person liable).

(3) VENEREAL DISEASES.

Out-Patient Clinics are held as follows :—

Institution.	Medical Officer.	Sessions.
Leicester Royal Infirmary.	Dr. H. J. Blakesley. Dr. H. Atkinson.	<i>Male</i> :— Mondays 3.30 p.m. Wednesdays (Old Cases) 6.30 p.m. Thursdays 5.0 p.m. Fridays 6.30 p.m.
Ditto.	Dr. Bessie Symington.	<i>Female</i> :— Mondays 6.30 p.m. Wednesdays (Old Cases) 4.0 p.m. Fridays 3.30 p.m.
Loughborough General Hospital	Dr. J. B. Dalton.	<i>Male</i> :— Mondays 5.15—6.15. p.m. <i>Female</i> :— Mondays 4.0—4.45 p.m.

Payment of travelling expenses is made to those patients attending Out-Patient Clinics whose financial circumstances are considered necessitous.

Free supplies of Arsenobenzol Compounds are issued from the County Health Department to those General Practitioners who are authorised to administer them.

Pathological examinations are made in the County Laboratory, 17, Friar Lane, Leicester, specimens for Wassermann tests being despatched from there to the Leicester Royal Infirmary.

(4) TUBERCULOSIS DEPARTMENT.

INSTITUTIONAL TREATMENT.

(i) Early Pulmonary Cases.

Mowsley Sanatorium,		
Husbands Bosworth	50 Beds.	Women and Children.
Creaton Sanatorium,		
Northamptonshire.	30 Beds.	Men.
Coalville Residential		
Dispensary.	8 Beds.	Women.
Hinckley Residential		
Dispensary	15 Beds.	Men.

(ii) Advanced Cases.

Melton Isolation		
Hospital, Tuberculosis	6 Beds.	Men and Women.

(iii) Surgical Cases.

Mowsley Sanatorium	12 Beds.	Women and Children.
Hinckley Residential		

Dispensary. 7 Beds. Men and Older Boys.

Surgical Beds are also reserved, as occasion requires, at the following Orthopædic Hospitals :—

Manfield Orthopædic Hospital, Northampton.—Adults and Children.

Warwickshire Orthopædic Hospital, Coleshill.—Children.

Additional beds at outside Sanatoria are provided by special arrangement when required.

(iv) Pre-tubercular Children, etc.

Charnwood Forest Convalescent Home.—10 Beds.

OUT-PATIENT DISPENSARIES.

LEICESTER, 17, Friar Lane :

Thursday, 10 a.m. Special cases by appointment only.

Wednesday, 10 a.m. All other cases for consultation, etc.

LOUGHBOROUGH, John Street Clinic :

Thursday, 10 a.m.

HINCKLEY Residential Dispensary, Manor House, Bond Street :

Monday, 10 a.m.

COALVILLE Residential Dispensary, Bakewell Street :

Friday, 10 a.m.

MELTON MOWBRAY, 5a, Nottingham Street :

Tuesday, 10 a.m.

All cases unfit to attend the Out-Patient Dispensaries will be visited by the Tuberculosis Medical Officers at their own homes, on the request of the General Practitioner in attendance.

These Dispensaries are intended not only for the observation or supervision of Tuberculous patients, but any doubtful case which is not notified may be referred by General Practitioners for opinion at the times and days stated above.

No action is taken under the County Scheme in any case unless with the consent of the patient's own Doctor.

Domiciliary Nursing.

Home Nursing of advanced cases of Tuberculosis is carried out by arrangement with the County Nursing Association. The selection of suitable cases rests with the General Practitioner in attendance, to whom application should be made in the first instance. The case is then reported by him to the Tuberculosis Officer for approval.

Shelters with Beds and Bedding are provided for the use of patients where suitable accommodation is available. Application for shelters should be made to the Tuberculosis Officer. Approval will be given chiefly in cases of overcrowding or where the lack of a separate room for the patient involves risk of infection to others. Patients who have been provided with shelters are visited at regular intervals by the County Health Visitors or the Staff of the County Nursing Association.

Extra Nourishment is granted to selected patients who are in very poor circumstances. Each case is reported by the Tuberculosis Medical Officer to the Committee for the consideration of financial circumstances.

Medical Help in the form of dressings, water cushions, bed rests, etc., is also granted in certain cases.

Home Visiting.— Regular Home Visiting of all notified cases is carried out by the Health Visitors of the County Council. Their duties include supervision of home conditions and family contacts, giving instruction with regard to disinfection, and reporting on general health matters.

(5) INFECTIOUS DISEASES.

Isolation Hospital Accommodation.

The Leicestershire Isolation Hospitals Committee is the Authority responsible for the isolation of cases of Infectious Disease in the County. Although by its constitution this Committee is a separate legal authority, its personnel is identical with that of the Public Health and Housing Committee of the County Council.

Accommodation is available in the following Hospitals:—

Blaby : Tel. Wigston 89462 ; Hinckley : Tel. 118 ; Melton Mowbray : Tel. 66 ; Loughborough : Tel. 113 ; Ibstock : Tel. 14 ; Swannington : Tel. Coalville 159, and *Moira.

* The Institution at Moira is opened only as an emergency hospital in serious epidemics.

Applications for admission of cases of infectious disease should be made through the District Medical Officers of Health to the respective Matrons whose telephone numbers are given above, or to the Clerk of the Committee, Mr. J. Baylis, 17, Friar Lane, Leicester (Telephone No. Leicester 59302). During the evening and at week-ends the Clerk may be communicated with at his home (Telephone, Leicester 7616).

For the disinfection of premises after the removal of an infected patient, application should be made to the Sanitary Inspector of the Local District Council.

(6) LABORATORY.

The following is a summary of the investigations carried out in the County Laboratory :—

- Throat Swabs for Diphtheria.
- Sputa for Tubercl Bacilli.
- Bacteriological milk examinations.
- Hair for Ringworm.
- Blood Counts (differential) : complete counts when possible.
- Water analysis (public supplies).
- Films for Gonococci.
- Exudate for S. Pallida.
- Widal Tests.
- Urine Examination (Chemical and Bacteriological).
- Fæces for B. Typhosus.
- Pus for Organisms.
- Serous Fluids.
- Cerebro-Spinal Fluid (General and Cytological).
- Blood for Wassermann Test.

All the above examinations are performed for General Practitioners free of charge. The specimens for Wassermann Test are forwarded to the Leicester Royal Infirmary, but no charge is made if they are sent through the County Laboratory.

Specimens of Cerebro-Spinal Fluid for Cerebro-Spinal Meningitis are charged to the Local Authorities concerned at the flat rate of £2 2s. per case where the patient is visited and lumbar puncture performed by a member of the Health Department, and 10s. 6d. when the fluid is collected by the General Practitioner in attendance and forwarded to the Laboratory by post or train.

Bacteriological examinations of specimens of milk are charged for at the nominal fee of 2s. 6d. each when examined under the County scheme. The fee is paid by the Local Authority sending the samples. Private samples can be examined at a charge of 3s. 6d.

Samples of water from *public* supplies are analysed free of charge.

Throat Swabs from Isolation Hospitals are paid for at the rate of 2s. each by the Isolation Hospitals Committee, and specimens of sputum

for Tuberclle Bacilli are paid for by the Public Health Committee at the rate of 2s. 6d. per specimen.

When epidemics of Diphtheria occur amongst school children all the scholars are medically inspected by one of the Medical Staff, and throat swabs taken from any possible "carriers" who might be a source of infection.

(7) MILK AND DAIRIES (CONSOLIDATION) ACT, 1915.

On receipt of a notice from the Medical Officer of Health of another Sanitary Authority that Tuberclle Bacilli have been found in a sample of milk produced in this County and supplied to his area, arrangements are made for the inspection of cattle on the affected farm by the County Council Veterinary Surgeon. Any animal found on inspection to be tuberculous or whose milk gives a positive result to biological tests, is dealt with under the Tuberculosis Order, 1925.

Samples of milk are obtained through the Sanitary Inspectors of the District Councils by the County Health Department from herds in which there is a suspicion of Tuberculosis. If a sample is found to contain Tuberclle Bacilli, the procedure indicated in the preceding paragraph is carried out.

(8) SALE OF FOODS AND DRUGS ACTS.

The duties under these Acts are carried out by the County Police.

(9) TUBERCULOSIS ORDER, 1925.

This Order is administered by the Diseases of Animals Sub-Committee, and notifications relating to any bovine animal, suffering, or appearing to be suffering from Tuberculosis, should be sent to the Clerk of the County Council, 10, New Street, Leicester.

(10) RIVERS AND STREAMS.

The County Council, acting through the Public Health Committee, carries out the duties under the Rivers Pollution Prevention Acts.

Sewage Works and Sewage Farms, and Rivers and Streams which receive their effluent, are periodically inspected by the County Medical Staff. Any communications or complaints regarding the pollution of rivers or streams should be addressed to the County Medical Officer.

On the other hand, complaints regarding the repair of houses, water supply, defective sewers and drains, should be sent to the local Sanitary Authority. For convenience of reference a list of the District Medical Officers of Health is given below :—

(11) DISTRICT MEDICAL OFFICERS OF HEALTH.

URBAN :—

District.	Name and Address.	
Ashby	Dr. T. Forsyth	Hugglescote.
Ashby Woulds	Dr. R. Logan	Ashby-de-la-Zouch.
Coalville	Dr. Hamilton	Coalville.
Hinckley	Dr. J. H. Donnell	Hinckley.
Loughborough	Dr. Blackham	Loughborough.
Market Harborough	Dr. Scott	Market Harborough.
Melton Mowbray	Dr. O'Connor	Kirby Muxloe.
Oadby	Dr. O'Connor	Kirby Muxloe.
Quorn	Dr. O'Connor	Kirby Muxloe.
Shepshed	Dr. T. Bell	Shepshed.
Thurmaston	Dr. O'Connor	Kirby Muxloe.
Wigston	Dr. O'Connor	Kirby Muxloe.

RURAL :—

District.	Name and Address.	
Ashby	Dr. T. Forsyth	Hugglescote.
Barrow	Dr. O'Connor	Kirby Muxloe.
Belvoir	Dr. F. J. H. Martin	Bottesford.
Billesdon	Dr. O'Connor	Kirby Muxloe.
Blaby	Dr. O'Connor	Kirby Muxloe.
Castle Donington	Dr. Fletcher	Castle Donington.
Hallaton	Dr. O'Connor	Kirby Muxloe.
Hinckley	Dr. O'Connor	Kirby Muxloe.
Loughborough	Dr. Blackham	Loughborough.
Lutterworth	Dr. O'Connor	Kirby Muxloe.
Market Harborough	Dr. Macbeth	Kibworth.
Market Bosworth	Dr. Kelly	Desford.
Melton Mowbray	Dr. O'Connor	Kirby Muxloe.

GENERAL PROVISION OF HEALTH SERVICES. HOSPITAL ACCOMMODATION.

(a) FEVER.

In April of this year the duties of the Leicestershire Isolation Hospital Committee were taken over by the Public Health and Housing Committee. At first 12 members only of this latter Committee were appointed to undertake this work.

This small Committee finding that the work could not be conveniently carried out by so few members, requested the County Council to make an Amending Order providing that the Hospital Committee should consist of the whole of the members for the time being of the County Public Health and Housing Committee. This the County Council agreed to do, and the Amending Order, dated 9th May, 1928, also gave power to co-opt eight additional members from the Council or outside.

Sub-Committees to supervise the administration of the various Institutions have been elected, and numerous visits of inspection have been made. It has not been found necessary to extend the personnel of the Committee under the powers conferred by the Amending Order.

The Hospitals provided for the treatment of infectious diseases (other than Smallpox) are as follows :—

(1) Permanent Hospitals :—

Blaby	...	...	...	...	...	...	17	Beds
Hinckley	...	...	...	...	...	...	23	„
Melton Mowbray	...	...	...	...	...	...	23	„

(2) Temporary Hospitals :—

Loughborough	...	...	...	...	...	...	9	Beds
Ibstock	...	...	...	...	...	...	12	„
Swannington	...	...	...	...	...	...	4	„
Moira	...	...	...	...	...	...	6	„

In my report of last year I stated that "these temporary hospitals are out-of-date; their structure is antiquated, and they have neither the cubic space nor the equipment requisite for the treatment of infectious diseases."

The new Committee constituted under Article 26 of the Leicestershire Isolation Hospitals Order, 1919, have recently approved plans, specifications and estimates for the erection of a combined Sanatorium and

Isolation Hospital at Markfield, where 54 beds will be set apart for the treatment of infectious disease.

The proposed allocation of the isolation beds at the new Institution is as follows :—

Scarlet Fever	...	...	...	...	...	28	Beds
Diphtheria	...	...	...	...	...	14	„
Typhoid Fever	}	and Observation	}	...	...	12	„

Motor ambulances are stationed at the Isolation Hospitals at Blaby and Melton Mowbray. The Institution at Hinckley has a horse-drawn ambulance, and Loughborough and Ibstock Hospitals have broughams, the necessary horses being hired as required. The horse ambulance and broughams are used for the removal of patients from the immediate vicinity of the hospitals only, the motor ambulances being used for longer journeys and also to convey patients to the Institutions unprovided with transport.

The Medical Practitioners in charge of the Isolation Hospitals have made considerable use of the County Health Committee's Laboratory. During the year no less than 893 specimens have been examined and reported upon.

(b) SMALLPOX.

Two Hospitals are available for the isolation of these cases, viz., Syston and Snarestone Smallpox Hospitals having accommodation for 25 and 23 patients respectively.

Neither of these Hospitals was open in 1927 as only one case occurred during that year. This patient was removed to the Smallpox Hospital at Nottingham on December 28th.

In 1928 it was found necessary to open Syston Hospital from about the middle of February until the 23rd June. During the year Snarestone Hospital was not in commission at all.

PREVALENCE OF, AND CONTROL OVER, INFECTIOUS AND OTHER DISEASES.

Observations taken by Mr. W. G. J. Clark, the Surveyor of Wigston Magna Urban District, show that the year's rainfall was about 3 per cent. below the average of the past 28 years.

The Summer and early Autumn were warm and sunny, and very little rain fell, except in the month of June. Mr. Clark records the following figures of total depth in inches :—April 0.95, May 0.92, June 2.85, July 1.23, August 1.74, and September 0.77. As might be expected from the warm Summer there was some increase in the number of deaths from Infantile Diarrhoea, while fewer deaths occurred from Bronchitis and the acute diseases of the respiratory system. There was also a welcome decrease in the number of cases of Pneumonia (292 notifications as compared with 387 last year) and the number of deaths from this disease fell from 185 to 126.

With regard to notifiable diseases in general the distinguishing features of the year were the great increase of cases among the commoner infections of childhood, especially Scarlet Fever and Diphtheria, and the relative freedom from the rarer infections of the central nervous system. Only five cases of Poliomyelitis were notified, one of Polioencephalitis, one of Cerebro-Spinal Fever, and eight of epidemic Encephalitis.

The epidemic of Scarlet Fever was fortunately mild in character, but the large number of cases notified created some difficulties in administration. The Isolation Hospital accommodation was strained to its utmost on account of the combined burden of Scarlet Fever and Diphtheria, and it became necessary to open the emergency hospital at Moira in order to relieve the congestion.

DIPHTHERIA.

395 cases of Diphtheria were notified during 1928—an increase of 64 on last year and of 130 on 1927. This high figure is partly accounted for by the continuation of the 1927 Coalville outbreak into the first quarter of 1928. In the third and fourth quarters of the year, however, the disease became widely prevalent in the rural districts, especially Ashby, Blaby, Hinckley, and Market Bosworth. 330 cases of Diphtheria received treatment in the Isolation Hospitals (*i.e.*, 85 per cent. of the total number).

SMALLPOX.

Mild Smallpox made its appearance in Leicestershire at the close of 1927, and in the year under review 25 cases were notified. The first case was admitted to Syston Smallpox Hospital on February 16th, and 21 cases in all were isolated in this hospital during the succeeding four months. Of these 14 came from a circumscribed area in Hinckley, but, thanks to the prompt action of the District Medical Officer of Health, the outbreak was kept under control.

Of the 18 cases resident in the County 16 were unvaccinated; 2 were stated to have been vaccinated in infancy—one a man of 56 who showed no scars, and the other a man of 62 who had a $\frac{1}{2}$ inch scar.

By arrangement with the City Authority 9 cases from Leicester were treated at the Syston Hospital during the period of its activity—from the middle of February to June 23rd.

No further County cases occurred until October, when four contacts of City patients contracted the disease. These four cases were, under the mutual arrangement in force between the City and the County Authorities, treated in the City Isolation Hospital.

In comparison with other areas Leicestershire has been singularly fortunate in having only 25 cases during the year, and only four during the last six months. The most recent case was notified on November 24th.

SCARLET FEVER.

The number of notifications of Scarlet Fever reached almost three times the previous year's figure. The rural districts of Barrow, Blaby, Hinckley, and Market Bosworth suffered most severely, while Coalville, with 274 notifications, was the only urban district in which the epidemic assumed serious proportions.

In the late Autumn the village of Kegworth was the victim of a concentrated invasion by Scarlet Fever. No less than sixty cases were reported during that period, and it became necessary to close the schools in the hope of limiting the spread of the disease. It was a remarkable circumstance that the neighbouring villages entirely escaped.

In spite of the great increase in the number of cases only three deaths occurred—the same number as last year. 836 cases were admitted to the Isolation Hospitals.

MEASLES.

The weekly return received from Elementary Schools shows that Measles, in common with the other exanthemata, was rather more prevalent than last year. Seven schools were closed on account of this infection, and certificates of reduced attendance were granted to 22 schools.

INFLUENZA.

The records of infectious disease taken from the school weekly returns show a striking fall in the number of absences due to Influenza. No schools were closed, and only five certificates of lowered attendance were issued on this account—as compared with 120 last year.

PUERPERAL FEVER AND PUERPERAL PYREXIA.

12 cases of Puerperal Fever, and 27 of Puerperal Pyrexia were notified, as against 8 and 23 respectively in 1927. The number of deaths recorded as due to Puerperal Sepsis was 12.

ENTERIC FEVER.

The total number of notifications of Enteric Fever was 14 as against 20 last year. Three cases of Dysentery were also recorded. There was no local concentration of cases such as would warrant special investigation. 11 cases were treated in the County Isolation Hospitals.

OTHER DISEASES.

OPHTHALMIA NEONATORUM.—The following is the record for 1928 :—

Notified	Cases.		Vision Un- impaired	Vision Impaired	Total Blindness	Deaths				
	Treated									
	At Home	In Hospital								
18	16	2	16	2	—	—				

MATERNITY AND CHILD WELFARE.

It is widely recognised and freely admitted that in Maternity and Child Welfare work Preventive Medicine has its best chance of effective work as regards the individual, in that here we start nearer the beginning of life, than in the other departments of the Health Service.

When Local Government Authorities took the step back from school age to infancy, they took a step forward in the scientific sense and grasped a new opportunity of anticipating and preventing many of the defects they had previously only been able to deal with remedially. Still further progress was made when the care of the pregnant mother and her unborn child was brought into the region of practical politics through the Ante-natal Clinics, and to-day there are already signs that educational forces are not only being brought to bear on the ante-natal life of the child, but that through teaching of girls of school age the fringes of pre-maternal hygiene have already been touched.

As there are many and various views current as to the legitimate scope of Infant Welfare work I would like to make it clear that in this County its aims are fundamentally *educational*. The majority of children are born healthy, and all that is required to enable them to progress to healthy manhood and womanhood is rational treatment in clean homes under the care of wise and efficient parents. Much might conceivably be gained from the merely physical point of view by placing children as soon as possible after birth, largely or wholly, in the hands of trained medical and educational experts, but the Doctor who understands the true value of the fullest development of the individual with all the subtle considerations which this implies, knows that far more would be lost. We look to the parents as the proper guardians of the child—the family doctor as its proper medical attendant, and the Welfare Centre as the guide in normal, healthy infancy. For however much we may regret it we must accept the fact that only a very small percentage of mothers to-day even think of consulting their own doctor on matters connected with the daily routine of the healthy normal child—indeed one may go further and say that under the stress of modern practice it is but a small number of doctors for whom it would be practicable to give up sufficient time to the individual instruction of even the primiparae whom they attend.

The gathering together of mothers at a specified time and place for the purpose of teaching, individual or collective, as is done at the Welfare Centre, is not feasible for the busy general practitioner.

This being our view it follows that no medicines are dispensed from the Centres, no prescriptions given, and advice as to the correction of infant maladies is restricted to the use of what may be legitimately called 'domestic remedies.' The border line between Counsel and Treatment is touched when we come to the question of the provision of Chemical Foods and so-called Food Medicines. This part of the Centre's activities remains, as it always has been, in the hands of the Voluntary Committee, and the sale of these articles forms a valuable source of revenue to the Centre, the profits being spent on such things as the Christmas Tea, the Summer Outing, or prizes for competitions. It must never be overlooked, however, that only a clear understanding of the subject and a very close co-operation between the voluntary worker and the medical staff can prevent this part of the scheme being a weakness in the educational part of the work. The powerful influence of advertisement—of superficial articles in the daily press—fosters the prevalent tendency to snatch at short cuts to health; to seek to replace by some easily purchased chemical commodity that patient conscientious application of the simple laws of diet and hygiene, without which a high standard of resistance to illness and the wear and tear of life is impossible.

Medical Supervision.

A very important development has taken place during the year with regard to the medical supervision of the Centres. Hitherto, owing to shortage of Medical Staff, it was not found possible to engage in systematic inspection of all children attending the Centres. The appointment of Dr. Walters, as Assistant Medical Officer of Maternity and Child Welfare, has enabled us to enlarge the scope of medical examinations and to conduct the medical work on scientific lines. This development will be continued during the coming year, but the prospective opening of one more Ante-natal Clinic and at least three more Infant Welfare Centres will impose a strain on the present staff which may hinder further progress in this direction.

At present the medical work is on a very sound basis; the Medical Officers attend each Centre at least once a month, and examine and advise upon (a) All new cases, (b) Special cases brought for advice by the Health Visitor or Mother, and (c) Older children at intervals of not more than 12 months.

The Infant Welfare Centres now have their proper place in the Maternity and Child Welfare Scheme.

All meetings of the Welfare Centres are attended by a Health Visitor of the County Staff who superintends the weighing of the children and gives advice to the mothers on subjects related to the health and proper up-bringing of their children. When a Medical Officer is not present the Health Visitor generally gives short talks to the parents on the hygiene of the home, feeding, etc. The total number of mothers on the books of the Centres is 2,458 as against 2,380 last year. The records show 1,495 babies under one year, and 1,535 toddlers.

Satisfactory use has again been made of the Exhibition as described in detail in last year's Report.

There are now 39 Centres under the administrative control of the County Council :—

Centre.	Where Held.
Open Once a Week :	
Ashby-de-la-Zouch.	Baptist Church Room.
Coalville.	Primitive Methodist Schoolroom.
Hinckley.	Holy Trinity Hall.
Measham.	Baptist School.
Melton Mowbray.	Wesleyan Schoolroom.
Moira and Donisthorpe.	Church Room.
Mountsorrel.	Reading Room.
Quorn.	Village Hall.
Sileby.	Pochin Hall.
Whitwick.	Constitutional Club.

Open Twice a Month :

Anstey.	Church Room.
Asfordby.	*Parish Hall.
Barrow-on-Soar.	Church Room.
Barwell.	Co-operative Hall.
Blaby.	Baptist Room.
Bottesford.	Belvoir Coffee House.
Cosby.	Primitive Methodist Schoolroom.
Desford.	Men's Institute.
Earl Shilton.	Co-operative Hall.
Enderby.	Mission Room.
Fleckney.	Mission Hall.
Glenfield.	Village Institute.
Humberstone,	Parish Hall,

Open Twice a Month—continued.

Ibstock.	Church Schoolroom.
Kibworth.	Village Hall.
Lutterworth.	Church Hall.
Narborough.	Church Room.
Oadby.	Adult School.
Rearsby.	“Church Leys.”
Rothley.	Village Hall.
Shackerstone.	Schoolroom.
Shepshed.	Primitive Methodist Schoolroom.
South Wigston.	*Congregational Schoolroom.
Stathern.	War Memorial Institute.
Syston.	Church Hall.
Thurmaston.	Working Men’s Club.
Whetstone.	Congregational Schoolroom.
Wigston Magna.	Co-operative Hall.

Open Once a Month :

Evington.	Village Hall.
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* Removal during year.

New Centres Commencing 1929 :

Birstall.	Reading Room.
Lubbesthorpe.	Wesley Hall, Southfields Drive.
Hugglescote.	Baptist School Room.

No change has taken place in the number of Infant Welfare Centres this year, but arrangements have been completed for the organisation of three new Centres in 1929—Birstall, Hugglescote and Lubbesthorpe. Two Centres have removed to new premises:—Asfordby, which is now held in the Village Hall, and South Wigston which meets temporarily in the Wesleyan Chapel rooms during the period of reconstruction and enlargement of their previous premises in the Church Sunday School.

The figures given below give some indication of the development of Infant Welfare work in the County during the past decade. It will be observed that the number of medical inspections increased steadily up to 1924, when the opening of several new Centres produced a relative shortage of staff. This deficiency was made good by the appointment of Dr. Walters in 1928 as Assistant Medical Officer for Infant Welfare.

	No. of Centres.	No. of Visits by Medical Officers.
1919	18	<i>Not Ascertained.</i>
1920	31	133
1921	31	161
1922	31	192
1923	33	239
1924	34	262
1925	37	259
1926	40	250
1927	40	306
1928	39	411

Of the 411 visits made during the year, Dr. Fairer made 45, Dr. Coward 59, Dr. Mackintosh 61, Dr. Weston 134, Dr. Walters 101, Dr. Buchanan 2, Dr. Dalton 7, Dr. Murray 2.

The main statistical facts concerning the findings of the medical examinations are as follows :—

The total number of infants examined was 2,318, of these 517 or 22 per cent. were first-born. The total number of children weighed was 20,546.

In 1,305 cases details of feeding during the first three months were investigated : 839 or 64.3 per cent. were breast-fed; 300 or 22.9 per cent. received fresh cow's milk, and 166 or 12.8 per cent. were fed on dried milk or patent foods. These figures correspond pretty closely with those of 1927, but show a slight decrease in the number of infants fed on patent foods.

It is interesting to compare these findings with some observations made by Dr. Mary Weston in the years 1925 to 1926 on 357 cases before the introduction of medical record cards in the Infant Welfare Centres.

	No. of Cases.	Percentages
A. Bottle-fed from Birth	62	17.4
B. Breast-fed Less than two weeks	28	7.8
From two weeks to three months	84	23.3
From three to six months	43	12.2
From seven to twelve months	89	24.9
Over twelve months ...	51	14.4
	—	—
	357	100.
	—	—

In the 217 cases weaned under 6 months the following causes were assigned :

	Number.	Percentage.
Supply inadequate or absent	106	48.8
Mothers' Health	35	16.1
(Three were Tuberculous and one died after Puerperal Insanity).		
Work	8	3.6
Abscess of Breast	7	3.3
Retracted Nipples	3	1.3
Child's Refusal to take Breast	3	1.3
"Did not Suit"	4	1.8
Cause not Ascertained	51	23.5

The series included 7 cases of Twins and 1 of Triplets.

Of the 7 cases of twins—

- 2 were not breast-fed at all.
- 1 breast-fed for two weeks only.
- 2 breast-fed for six months.
- 1 breast-fed for fourteen months.
- 1 breast-fed for sixteen months.

Of the triplets 2 babies were breast-fed for 12 months and the third was bottle-fed from birth.

The principal defects observed at routine visits to Welfare Centres during 1928 were as follows :—

Bronchitis	47
Hernia	56
Ear Disease	11
Thread Worms	8
Phimosis	27
Eye Conditions	26
Mongolism	8
Tuberculosis (Surgical)	3
Naso-pharyngitis	25
Rickets	31
Glands Enlarged	5
Skin Conditions	45
Epilepsy	3
Congenital Deformity	8
Anterior Poliomyelitis	3
Spastic Paraplegia	2
Congenital Heart Lesion	2

A history of previous Infectious Disease was given in the following cases :—Measles 3, Whooping Cough 6, Scarlet Fever 2, Chicken Pox 2.

Health Teaching through the Centres.

It has been noted above that the teaching of the Infant Welfare Centres is both individual and collective.

The thoroughness with which both these lines of education can be carried out is bound to vary inversely with the size of the Centre. It would be well for this aspect of the work, if financial and other considerations permitted the bi-weekly meeting of the very large Centres with half the number of cases at each session. When the numbers at each meeting are habitually over 30 or 40 the personal note which is of supreme importance is almost inevitably submerged. With regard to the individual teaching, the introduction of record cards for the Medical Officers' notes has been an inestimable advantage, not only in recalling to his memory the advice given at previous consultations but also in giving him the benefit of knowing what has been suggested or noted by a colleague who may have seen the case since his own last visit. An endeavour is made to give a simple talk on some health subject to all the mothers collectively at each meeting, by the Medical Officer if present, or in the absence of a Medical Officer by the Health Visitor. A record is kept of the subjects spoken upon to prevent overlapping by different speakers.

The time has come for our Infant Welfare Centres to take a wide view of their responsibilities in Health Education, for their possibilities are great and the need for sound doctrine on scientific lines is imperative.

But in order that these potential forces may become in the fullest degree active, the subject must be taken seriously by all concerned—Teacher, Committee, and Mothers alike. One has to rely on the members of the Voluntary Committee to do all in their power to create a sympathetic atmosphere by the promotion of quiet and the provision where possible of a separate room, or at least of sedentary occupation for the toddlers.

Though the address may be valuable in itself and carefully thought out by the Medical Officer or Health Visitor, its quality as delivered, as well as the receptivity of the hearers will depend to a considerable extent upon the manifest seriousness with which the Committee Members present regard this part of the afternoon's work.

Another aspect of the question all too easily overlooked is the value of the *indirect* teaching which is inseparable from the life of any Centre. To give a very simple example, there is a profound difference between the Centre which hands round mugs of milk or milk and water for the toddlers as a matter of course, and the Centre where tea is passed round to the mothers, and more suitable provision made for the toddlers only on those rare occasions where it is asked for. In the latter case the drinking of strong tea out of the mother's saucer soon becomes the routine practice of almost every infant old enough to drink at all, and we must realise that by our passivity we implicitly countenance this pernicious custom already so lightly regarded in the home.

The same principle applies very strongly to the question of outings and tea-parties. Only careful and painstaking Committee work can ensure that these subsidiary activities shall always possess their very real value as wholesome pleasures unmarred by transgressions of the very hygienic principles we seek to inculcate.

I cannot leave this part of the subject without a reference to some other activities of great educational value undertaken by some of the Committees and Health Visitors. Competitions, for example, where a prize is given for the best knitted garment made from a specific quantity of wool, or for the best articles made from purchases from a Jumble Sale got up for the Centre. The standard of article sent in has been very high, and the idea has proved most stimulating. One Centre has been ambitious enough to have a competition for Fathers, at which home-made cots and nursery furniture figured largely. A large number of Centres also provide a stall of materials, etc., for sale to the mothers at cost price.

The realisation of facts such as these intensifies our appreciation of the ungrudging work of the Voluntary Committees without which the Infant Welfare work as it stands would be impossible.

SUPPLY OF MILK TO NECESSITOUS MOTHERS.

The Maternity and Child Welfare Committee undertake responsibility for supervising the County scheme for supplying milk to expectant and nursing mothers, and to children under three years of age. The Committee receive from the Superintendent Health Visitor a full report on the home conditions of each applicant, together with a confirmed statement of the family's financial circumstances. Every precaution is thus taken to avoid making grants to cases which are not really necessitous. In order to avoid overlapping, no grant is made to cases

in receipt of Poor Law Relief. In 1928, 630 applications for milk grants were received, and 604 were approved by the Committee for periods not exceeding two months. The amount expended on this service was £587 15s. 8d. Every endeavour is made to provide the recipients with a clean and wholesome milk and, for this reason, Grade "A" milk is supplied wherever it is procurable. Mothers who receive milk under the scheme are expected to become members of a Welfare Centre if they live within a reasonable distance of a place where a Centre is held.

MATERNITY HOSPITALS.

The Leicester and Leicestershire Maternity Hospital has been approved by the Council for the reception of County cases, and a grant of £50 was made to this Institution. One case was admitted during 1928.

Provision is made for the reception of unmarried expectant mothers at St. Saviour's Home, Northampton. Two applications were considered and approved, but only one case was admitted during the year.

The County Council allows the expenditure of £25 a year for the Convalescent Home treatment of Nursing Mothers. Four cases received treatment; three in the Charnwood Forest Convalescent Home and one in the Convalescent Home of the Saturday Hospital Society. The total cost was £17 5s. 6d.

I referred last year to arrangements which had been made with the Warwickshire County Council to receive at their Maternity Home at Rugby, maternity cases from Leicestershire near the Warwickshire boundary. No emergency applications were received, but one ordinary case was admitted after consideration by the County Maternity and Child Welfare Committee.

Hospital of St. Cross.—

Arrangements have been made with this Institution to admit complicated maternity cases (other than Puerperal Fever or Puerperal Pyrexia) from this county.

(a) *Emergency Cases.*

The County Maternity and Child Welfare Committee undertake the responsibility for the payment of the cost of such cases (£3 3s. 0d. per week) provided that the County Medical Officer is notified as soon as possible after the patient's admission. The recovery of the whole, or part of the charge may be subsequently considered by the Committee.

(b) *Ordinary Cases.*

Approval of the Maternity and Child Welfare Committee must be obtained before an ordinary case can be admitted. Some contribution towards the cost will be required, except in necessitous cases.

During 1928 one emergency case was admitted to the Hospital. After considering the financial circumstances of the patient the Committee decided to grant £1 10s. 0d. per week towards the cost of treatment. The patient remained in the Institution for six weeks.

NURSING IN THE HOME.

Home nursing in general is undertaken by the County Nursing Association. The Association works on voluntary lines, and is able by an efficient system of federation to extend its services to cover practically the entire County. In connection with the Tuberculosis Service, The County Nursing Association co-operates with the Public Health Committee by undertaking Home Nursing of suitable cases in the districts supplied by the Service.

TREATMENT OF CHILDREN.

In addition to the provision made for the treatment of Tuberculous children at the County Sanatorium, the Children's Convalescent Home, Woodhouse Eaves provides accommodation for pre-tubercular children and for cases of early closed tuberculosis, from 5 to 10 years of age. Ill-nourished and delicate children from 3 to 5 years are also received.

Fifteen beds at this Home are reserved for County cases. The Home is under the supervision of the Senior Tuberculosis Officer.

The following is an excerpt from the report of Dr. Tuckett, Medical Officer of the Home :—

" The Children's Convalescent Home, Woodhouse Eaves, was opened on March 5th until December 15th. During this period 66 County cases were admitted. All the children benefited by treatment at the Home. The Summer was ideal, and it seems a pity that we cannot treat more cases. This could be done if permission could be obtained from the Ministry of Health to use the beds in the ward with a balcony. Ten children sleep out in the balcony all through the season, and we are not allowed to put any children into the empty ward, why I cannot understand. Owing to outbreaks of Chicken Pox and Scarlet Fever we had to stop admitting cases for three weeks.

Summary of cases treated during 1928 :—

Total	Number of Children	Tuberculosis.	M. and C.W.	Total.
Admitted	48	18		66
Average Stay of each Child...	62.1 days.	48.9 days.		58.3 days.
Average Gain in Weight.....	5-lbs. 14 oz.	3-lb. 1 oz.		5-lb. 2 oz.

State of Health on Discharge :—

	Tuberculosis.	M. and C.W.	Total.
(a) Satisfactory	5	1	6
(b) Improved	23	11	34
(c) Much Improved	19	6	25
(d) Discharged a few days after admission (developed Ring- worm)	1	—	1

Diseases from which Children were suffering when admitted :—

	Tuberculosis.	M. and C.W.
Pre-tubercular	38	—
Early Closed Tuberculosis	9	—
Surgical Tuberculosis	1	—
Debility	—	15
Curvature of Spine	—	1
Bronchitis	—	1
Rickets	—	1
	—	—
Total	48	18
	—	—

Signed R. W. TUCKETT,

Medical Officer,

Charnwood Forest Convalescent Home."

ORTHOPÆDIC TREATMENT.

In the ideal Orthopædic Scheme each Authority either singly, or in combination with a neighbouring Authority, enlists the services of a Central Orthopædic Hospital. This parent Institution organises a series of Out-patient Clinics so situated as to cover the whole area and to provide reasonably easy access for all patients requiring regular treatment. These Clinics are not isolated units but real Out-patient departments of the Hospital; they are attended by the Hospital staff of Surgeons and Nurses, and the medical history of each child forms an unbroken record from the time of his first enrolment on the books of the Clinic until his final discharge. After-care is carried out by voluntary workers, who are in close touch with both Clinics and Hospital.

It is in many ways unfortunate that a uniform scheme of Orthopaedic treatment covering the whole area of Leicestershire is not likely to be realised, at any rate, in the near future. At the moment matters are in a state of transition, and the situation is difficult to define in exact terms. Leicester Royal Infirmary, Manfield Orthopaedic Hospital, and the Warwickshire Orthopaedic Hospital for Children are all within reach of the County. A new Hospital devoted to Orthopaedics is in process of construction near Mansfield, Nottinghamshire.

The difficulty of administration therefore lies not so much in the number of beds available as in the possibility of developing a scheme of uniformity.

Leicester Royal Infirmary.

This great Voluntary General Hospital makes provision for Orthopaedic cases, and many children from the County receive operative treatment in the Hospital and subsequently attend the Out-patient Department for electrical treatment, massage, muscle re-education, and other remedial measures.

Invaluable as this work is, it lacks the continuity of treatment which is at the heart of an organic conception of Orthopaedic work. The staff of the Royal Infirmary are ready to co-operate with the County Authority, and as regards the provision of surgical apparatus this co-operation is cordial and complete. But no plan has yet been evolved for keeping a continuous and accurate record of the children's history. The Orthopaedic Department of the Infirmary is part of the Voluntary Institution, and the County Authority possesses no records of cases treated.

The Medical Officers of the County Staff are greatly indebted to the Administrative Staff of the Infirmary for the assistance which they so freely give in following up County cases, and to the Honorary Surgeons for their courtesy in reporting upon cases referred to them for consultation.

Manfield Orthopaedic Hospital, Northampton.

The selection of cases for this Hospital rests with Mr. R. S. Lawson, Honorary Surgeon to the Royal Infirmary. Mr. Lawson as a rule admits to his own wards cases requiring only short periods of treatment, and picks out "longer" cases for transfer to the Manfield Hospital. The cases selected by him are reviewed by the appropriate Committees of the County Council in order to make financial arrangements according

to the capacity of the parents to contribute towards the cost of maintenance. Some degree of continuity of treatment is made possible by the fact that Mr. Lawson and Mr. Wilson Stuart, the Surgeon in charge of the cases at Manfield Hospital, work in close co-operation. Nevertheless, this method falls short of the ideal by allowing a break in continuity and by not making adequate provision for After-care.

Manfield thus serves the needs of the Southern area of the County, but this part of our Orthopaedic scheme must remain but loosely united to the organization until a stronger link has been forged between the Hospital and the Clinic.

Two other agencies in the Southern area give their services to the same cause :

The Rugby Orthopaedic Clinic.

In response to an application from this Institution it was agreed that the County Maternity and Child Welfare Committee should approve a charge of 2s. 6d. per attendance for Leicestershire children whose treatment was undertaken by the Clinic, provided that

- (1) Application is first made to the County Medical Officer to enable the case to be visited by one of the Medical Staff.
- (2) Each application is considered by the Committee after an investigation into the financial circumstances.
- (3) Monthly progress reports are rendered by the Clinic to the County Medical Officer.

Hinckley Cripples' Guild.

This voluntary organisation makes provision for massage and other remedial measures for crippled children in its area.

I understand that patients are visited by a Nurse at their homes, and that suitable cases receive treatment at Rugby Orthopaedic Clinic or the Leicester Royal Infirmary, but no system of co-operation between the Guild and the County Council is in existence.

The Warwickshire Orthopaedic Hospital, Coleshill.

The original scheme for the Northern and North-Western districts of Leicestershire approaches much more closely to the ideal which I have outlined.

The central hospital at Coleshill is the parent institution where Leicestershire cases requiring operative treatment are under the care of

Mr. S. A. S. Malkin, F.R.C.S., of Nottingham. As Mr. Malkin is also Visiting Surgeon to the two Leicestershire Clinics associated with the Hospital, continuity of treatment is secured.

The present arrangement for co-operation between the Warwickshire Orthopædic Hospital and its Clinics involves a friendly association between the Nottingham Cripples' Guild and the two Clinics established in Leicestershire.

Cases selected for in-patient treatment from the Leicestershire Clinics are in the first instance referred to the Nottingham Cripples' Guild to make the necessary arrangements for admission.

Coalville Orthopædic Clinic.

The first County Orthopædic Clinic was opened at Coalville in December, 1928, and meets three times a week at the Primitive Methodist Schoolroom, Marlborough Square. The Orthopædic Surgeon attends once a month to see new cases and to review the progress of those who are receiving treatment. A trained Masseuse attends at each session of the Clinic and works under the direction of the Surgeon. The treatment provided consists of massage, electricity and exercises for muscle re-education. Patients requiring X-Ray examinations, plaster treatment and Ultra Violet Radiations are referred to the Loughborough Cripples' Guild at whose Clinic more elaborate arrangements are made.

The Coalville Clinic was originally organised at the instance of a local Committee of voluntary workers who undertook to provide voluntary helpers at each session of the Clinic. The Secretary of the Voluntary Committee arranges for the times of attendance of patients, for a sufficient number of voluntary workers to assist the Nurse at each session, and also arranges for visitors to carry out after-care work among patients who are no longer in attendance. The actual financial responsibility, however, rests with the County Council.

Loughborough Cripples' Guild.

The premises of this Clinic are at Packe Street, Loughborough. The Clinic is open daily for treatment by a qualified Masseuse, and an Orthopædic Sister attends once a week from Nottingham. The Surgeon visits the Clinic on the second Wednesday of each month. The Clinic is fully equipped with apparatus for all modern forms of Orthopædic treatment which can be given to cases attending as Out-patients.

The charge for ordinary County cases is 2s. 6d. per attendance, and small additional charges are made for special forms of treatment. The constitution of this Clinic differs from that of Coalville in this, that the financial responsibility rests entirely upon the Voluntary Committee.

The Local Authorities—Leicestershire County Council and Loughborough Borough Council—make contributions on an approved scale according to the cases treated.

Future Extensions.

The establishment of a Clinic at Melton Mowbray would complete the Orthopædic scheme in North Leicestershire, but the difficulty of obtaining suitable premises is insuperable. This difficulty, which is applicable to Coalville no less than Melton Mowbray, can be solved only by the construction or adaptation of premises which can be economically used for all the special services which are being developed in connection with Preventive Medicine. The establishment of combined Clinics is already under consideration, and the principle has received the approval of the County Council.

MATERNAL MORTALITY.

The steady decline in *Infant Mortality* which has taken place in Leicestershire and throughout the country generally has been ascribed partly to improved conditions of sanitation and general environment, but chiefly to "the quickening of public conscience upon the subject of late years."

Public attention has been recently directed to the fact that during all these years the rate of *Maternal Mortality* has remained practically stationary. In Leicestershire this point is readily demonstrated in the returns of Maternal Deaths for the past ten years :—

MATERNAL MORTALITY PER 1,000 BIRTHS.

Year.	Births	No. of Puerperal Deaths :—			Rates per	
		Sepsis.	Other Causes.	Total.	1,000 Births	Total.
1919	4,308	7	12	19		4.4
1920	6,333	13	9	22		3.5
1921	5,709	7	19	26		4.5
1922	5,522	3	10	13		2.4
1923	5,319	3	10	13		2.4
1924	5,130	3	11	14		2.7
1925	4,874	8	15	23		4.7
1926	4,868	5	12	17		3.5
1927	4,887	7	10	17		3.5
1928	5,074	12	12	24		4.7

It is worthy of note that 119 of the 188 Maternal deaths occurred in Rural districts (population 165,000), and only 69 in Urban districts (population 118,000).

For some years past both private and public effort has been directed towards the penetration of this secret of Maternal Mortality but without success. We continue to lose one mother in every 250 births, and there is no reason to hope that maternal invalidity after childbirth is declining.

After reviewing the situation the Minister of Health decided to clear the ground for further investigation. In accordance with his directions, a representative Committee on Maternal Mortality was set up. The Committee has drawn up an Inquiry Form for the investigation of maternal deaths, and this form has been circulated to Local Authorities. The Leicestershire County Council has appointed one of its Medical Officers (Dr. Mackintosh) to conduct the investigation in co-operation with the General Medical Practitioners of the County.

"It will be the business of the Maternal Mortality Committee to collate and classify the information received, to formulate any conclusions which may arise therefrom, to indicate the lines on which further research is desirable, and generally to advise what future action can be taken to bring about a progressive reduction of maternal mortality."—(Ministry of Health, Circular 888).

ANTE-NATAL WORK.

Though it is urgently necessary that the tragedy of Maternal Mortality due to childbirth should be entirely averted, it would be a poor policy to be content merely to see the mother escape with her life from what should be a normal physiological function. In Ante-natal work our views must be wide and the work founded on a sound and broad basis.

The Clinic must aim at the early detection of abnormalities such as contracted pelvis or toxæmia—conditions which may confidently be said to account for a certain number of maternal and foetal deaths.

At the same time the Medical Officer in charge must realise the great scope for work in the far larger classes of women who, though free from gross abnormality or disease are nevertheless suffering from those so-called "minor" maladies of pregnancy which are responsible for a great deal of ill-health and debility in women.

The unfortunate experience of many women in the past has produced an almost pathetically pessimistic outlook with regard to the pregnant woman's health. The re-iteration of the phrase "I must expect all that now" when such disabilities as vomiting, fainting, etc., are referred to, is gloomy evidence of this fact.

Only the determined refusal by the medical profession to countenance this unscientific outlook, and a prolonged campaign of education and demonstration through Ante-natal Clinics and elsewhere, can remove this obstacle from the path of preventive medicine. Thus by gradual advance we may hope to reach the stage when we may pilot the future mothers of the race not only safely through pregnancy but with unimpaired health and vigour through the succeeding phases of childbirth and lactation.

This branch of preventive medicine has not advanced *pari-passu* with Child Welfare and in Leicestershire Hinckley is the only Centre at which specific provision is made for safeguarding the health of the expectant mother, though arrangements are being made for the opening of another Centre at Wigston Magna in the new year.

The Hinckley Centre has continued to make satisfactory progress, and has been conducted on the same lines as last year. It has been held at the Y.M.C.A. rooms on the first Tuesday in the month, beginning at 2 p.m.

It is gratifying to note that the work has consistently developed both as regards numbers and also the area served. Cases have come to this Centre from Earl Shilton, Wibtoft, Wykin, Burbage, Higham, and Enderby.

Two qualified Midwives have taken up work in Hinckley during the year, and both have visited the Clinic on several occasions and brought their own cases.

There have been 29 new cases during the year, two of these having also attended with previous babies, and a total number of 55 attendances have been made.

Of these, 18 have been safely confined and the children are living, and six are still attending; two were diagnosed not pregnant, and three came in the first place for sterility.

Three cases were reported to private doctors on account of moderate signs of contracted pelvis, and 2 have been persuaded to have treatment for septic teeth.

The work has been much handicapped by being held on the same day as the Infant Welfare Centre, as it is impossible for the Ante-natal Clinic to be finished before the members of the Infant Welfare Centre arrive, and one Health Visitor cannot possibly attend to two Clinics running concurrently.

There is reasonable ground for the belief that the work will expand, and now arrangements are being made for a separate afternoon to be allocated to the Ante-natal Clinic.

MIDWIVES.

Employment of, and Subsidy to, Practising Midwives in the County.

1.—Subsidy to Midwives.

Subsidies to three Midwives were authorised by the County Council at a cost not exceeding £21 each per annum. The subsidy in each case has been given to the County Nursing Association for distribution.

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2.—Midwifery Scholarships.

The sum of £160 was allocated for this purpose. Six scholars completed their training in 1928, and a further six began their course of training during the year.

3.—Post-Certificate Courses.

The sum of £60 was included in the Annual Estimates for the purpose of making grants to Midwives who desired to take Post-Certificate Courses in order to keep abreast of modern developments in their work. Five applications were considered by the Committee in 1928; in each case a grant of £10 was allotted—£4 towards the charges of the Training Institution and £6 for travelling expenses and the provision of a substitute.

4.—Lectures to Practising Midwives.

Dr. E. Lewis Lilley, Obstetric Surgeon to the Leicester and Leicestershire Maternity Hospital, gave a series of lectures to Practising Midwives. These lectures, which have now become an annual event, are greatly appreciated; several letters were received from Midwives who

attended the course expressing their sense of the practical value of the instruction received. Dr. Lilley reports :—

"I have just completed the series of lectures which you asked me to give on behalf of the Leicestershire County Council for the benefit of Practising Midwives. Two lectures were given each day separated by an interval for tea.

At Leicester, December 5th, 21 Nurses attended ; at Loughborough on December 6th, 9 Nurses came ; at Coalville on December 7th, there were 17 Nurses, and at Leicester on December 12th there were 16 attendances. I understand that the attendance on December 5th was lessened because it happened to clash with another meeting for Midwives.

The procedure was on the same lines as last year. I spoke for some forty minutes on the "Prevention of Troubles in Midwifery," and then after the interval I spoke on subjects desired by the Midwives themselves. A considerable number of Nurses availed themselves of the invitation to choose a subject for the second lecture.

I think the lectures were thoroughly appreciated by those who came."

5.—Placing of Midwives.

A grant of £30 is made by the County Council for the training of Midwives freshly appointed either to fill a vacancy or to settle in a new area for which no previous arrangements have been made. Seven applications were considered by the Committee, and in each case a grant was approved—making a total expenditure of £210. The sum of £18 was expended in milage grants to Midwives taking cases outside their usual area of practice.

6.—Inspection of Midwives.

Inspection of Midwives is undertaken by the County Health Visitors, who carry out these duties under the supervision of the Superintendent Health Visitor. 207 Midwives notified their intention to practice ; 18 left the County during the year, and 2 ceased to practice. 186 of the County Midwives hold the certificate of the Central Midwives' Board, 4 the L.O.S. Certificate, and the remaining 17 belong to the "bona fide" classification.

No complaints regarding Midwifery practice were received during the year. 314 visits of inspection were made by the Health Visitors. The Inspectors did not find any cases in which it was necessary to report a

breach of the rules of the Central Midwives' Board. The Annual Returns received from the County Midwives are as follows :—

Medical help records	...	...	...	...	...	606
Notice of liability to be a source of Infection	...					65
Laying out of the dead records	...	...	...	...		53
Notice of Death of Mother or Child	...	...	...	...		10
Still birth records	...	...	...	...	...	40
Notice in <i>re</i> Artificial Feeding	...	...	...	...		34
Notice <i>re</i> change of address	...	...	...	...		20

The Midwives called in Medical help in 33 per cent. of the cases attended by them. Medical assistance was required in 606 cases, 499 for the mother and 107 for the child. The registers kept by the Midwives show that 2,531 cases were attended by them during the year ; of this number 1,719 were taken by Midwives alone ; in the remaining 812 cases both Doctor and Midwife were in attendance.

7.—Doctors' Fees in Special Cases.

The sum of £4 4s. 0d. was expended in two complicated cases where it was necessary for a Doctor to be in attendance. No Midwife was engaged in these cases.

8.—Sparsely Populated Areas.

The County Maternity and Child Welfare Committee reconsidered the question of the cost of providing Midwives for the six districts known as Sparsely Populated Areas. It was decided that for their future administration Associations should be formed. Fees received for the services of Midwives are to be retained by the Association. The grant is to be reduced from £78 per annum to a maximum of £72 for two of the Associations, and to £52 for the other four. The bicycling allowance of £6 per annum is to be continued except in the case of two Associations.

9.—Midwives' Fees.

Applications were received from six Certified Midwives in respect of their attendance on necessitous cases. Grants amounting to £7 10s. 0d. were made in five cases, the remaining case being refused.

10.—Necessitous Districts.

In order to overcome some of the difficulties of Midwifery practice in necessitous districts the County Council are prepared to make grants towards expenses. Sums amounting to £14 and £12 respectively have been allotted to two District Nursing Associations towards the initial expenses incurred in serving a necessitous district.

Grants varying from £5 to £21 per annum were made to 23 districts in which the service was already in operation. Applications for these grants or for the continuation of previous grants are considered by the Maternity and Child Welfare Committee early in each financial year when the Nursing Association of each district is required to produce a balance sheet of the previous year's accounts.

11.—Midwives' Act, 1918.

232 claims were paid under the provision of this Act. The total amount expended was £314 2s. 0d. During the year £175 16s. 0d. was recovered from persons responsible for repayment.

12.—Registration of Maternity Homes.

On 1st January, 1928, ten Maternity Homes possessed Certificates of Registration under the Midwives' and Maternity Homes Act, 1926. Between 1st January and 30th June the use of two Homes was discontinued, and one new applicant for registration was refused.

The Nursing Homes Registration Act, 1927, which came into operation on 1st July, 1928, supersedes the whole of the above Act in so far as it deals with Maternity Homes. Under the new Act—which makes it an offence for any person to carry on a Nursing Home (which includes a Maternity Home) without being registered in respect thereof—eight Maternity Homes which were in existence under the old Act received new certificates of registration. During the second semester three new applications for registration were received and approved; one for Maternity cases only and two for Nursing cases. One of the latter was granted registration subject to the restriction that no acute Medical or Surgical cases should be admitted.

As the Act does not require registration unless the Homes are carried on with a view to financial profit exemption was granted to seven Institutions—five Cottage Hospitals, one General Hospital, and one "Home of Rest."

VENEREAL DISEASES.

The County Council makes provision for the treatment of Venereal Diseases by co-operation with the Authorities of Leicester Royal Infirmary and of Loughborough General Hospital. The Out-patient Clinic at Loughborough is conducted by Dr. J. B. Dalton, of the County Medical Staff, and is wholly under the administration of the County Medical Officer of Health. The Clinics at Leicester Royal Infirmary are administered by the Governing Body of that Institution, but County cases are received and treated under financial arrangements approved by the

Ministry of Health. At the Leicester Clinic the treatment of males is carried out by Mr. H. J. Blakesley, F.R.C.S., Eng.; Dr. Bessie Symington, M.D., B.S. (Lond.), is in charge of the female section.

Pathological Work.

Pathological examinations are performed through the agency of the County Laboratory. Blood for Wassermann reactions is transmitted to the Pathological Laboratory of the Leicester Royal Infirmary, as it is not economical to do these except when specimens are received in large numbers.

The following are extracts from the Annual Reports of the Medical Officers who conduct the Clinics for Venereal Diseases.

Loughborough Clinic Report.

This Clinic is held at the General Hospital and Dispensary, Loughborough, every Monday afternoon and evening. The times, up to June, 1928, when the Clinic was visited by Dr. Seymour of the Ministry of Health, were from 3 to 3.30 p.m. for women, and from 5 to 7 p.m. for men. In his report on the visit, Dr. Seymour suggested that 4 to 4.45 p.m. and 5.15 to 6.15 p.m. respectively would be enough for the needs of the Clinic. These new times are adhered to now as far as practicable, consistent with encouraging the patients, many of whom are dependent on rural bus services, to attend regularly. Occasionally, however, the Male Clinic has to be extended beyond the time allowed.

The following figures relate to the work during the year :—

New Cases :

	Males.	Females.	Total.
Syphilis	7	3	10
Gonorrhœa	14	3	17
Non V. D.	3	0	3
			30

Renewed Attendances :

Syphilis	125	166	291
Gonorrhœa	100	27	127
Non V. D.	9	0	9

Treatment.

38 injections of arsenobenzol compounds were given to 35 males and 3 females. Other forms of treatment, viz., Irrigations 102, Vaccines 11, and Bismuth Compounds 64, were given during the year, and in connection with diagnosis and arrest of disease, 45 pathological examinations were made in the County Laboratory.

The following figures show the work at the Clinic during the nine years of its existence.

	Males.	Females.	Total.	Yearly Average
New Cases	206	110	316	35.1
Renewed Attendances	2681	1593	4274	474.8
Arsenobenzol Compounds	325	190	515	57.2
Bismuth Compounds	—	—	205	41.0 (5ys.)
Pathological Examinations	—	—	1281	142.3

During these nine years 119 patients have been discharged cured. and 127 have ceased to attend before completing their treatment.

During the year 153 doses of Arsenobenzol Compounds have been supplied to four General Practitioners who are qualified to administer them.

The provision made at the Loughborough Clinic seems to be quite adequate for the needs of this borough and surrounding districts. The Staff consists of myself as Medical Officer, one Female Nurse, and one Male Nurse.

(Signed) J. B. DALTON,
V.D. Medical Officer.

Report on the work of the Male Venereal Diseases Clinic at the Leicester Royal Infirmary for the year 1928.

I beg to report on the work of the Male Venereal Clinic at the Royal Infirmary, under your control and that of the Ministry of Health, for the year ending December 31st, 1928.

During this period 579 patients presented themselves for diagnosis and treatment, and of these 145 were County patients.

By Clinical Examination 124 were apparently suffering from Syphilis, and 455 from Gonorrhœa. Of these, 5 patients were proved to be suffer-

ing from both acute Gonorrhœa and Syphilis. 147, after repeated Clinical and Pathological examination, were found to be non-venereal; 114 having been suspected of suffering from Gonorrhœa and 33 from Syphilis.

16,490 attendances were made by patients on the books; of these 3,798 received treatment for Syphilis, 12,692 for Gonorrhœa. 13,800 were City patients, and 2,690 County patients. 5,436 of these attendances were at times other than when the Clinic was in session for irrigations and other intermediate treatment. 5,016 attendances were by City patients and 520 by County patients.

In every case treated the blood and discharges were submitted for pathological and bacteriological tests for the purpose of diagnosis, aid to treatment, evidence of progress, and proof of recovery. The cerebro-spinal fluid in some cases of neurosyphilis was submitted to Wasserman or other tests.

To patients suffering from Gonorrhœa 11,220 intra-urethral irrigamuscular injections of Salvarsan substitutes, and 647 muscular injections of mercurial cream, were administered: 1,979 for City patients and 530 for County patients.

To patients suffering from Gonorrhœa 11,220 intra-urethral irrigations, anterior and posterior, were given, and instrumentation, instillation, vaccines, prostatic and urethral massage were practised as necessary treatment in a large number of these cases.

In-Patients.

67 patients were admitted to the wards, 40 being City and 27 being County patients; 77 were highly infectious; 11 cases acute epididymitis, 8 on admission, and three arose in course of treatment; 6 gonorrhœal rheumatism, 6 acute prostatitis, 3 penile and 1 perineal abscess. No case of gonorrhœal ophthalmia, 1 case of stricture of urethra with retention of urine—the result of old Gonorrhœa insufficiently treated. 10 cases of chronic syphilis were admitted, suffering from this disease of the brain and spinal cord, the heart and the eye and syphilitic tumours (gumma of scalp and leg). One case of jaundice was admitted, but no cases of arsenical dermatitis. Two deaths occurred, one, age 64—moribund of septicæmia on admission, the other one of cerebral haemorrhage into lateral ventricle—on postmortem examination—This patient, age 58, was admitted to the ward for the purpose of giving a small dose of Neokharsivan which was administered to him in bed. He collapsed and died four hours after intravenous injection of Neokharsivan .45 gram.

One case of Gonorrhœa, owing to neglect or ineffective treatment, developed cystitis, pyelitis and disorganisation of right kidney. This organ was removed, and the cystitis and urethritis disappeared, and the young man was discharged with no evidence of Venereal Disease.

Results.

The number of patients who ceased attendance before completing the first course of treatment were :—

Syphilis	...	...	18
Gonorrhœa	...	...	43

who ceased attendance after completing one or more courses, before completion of treatment necessary :—

Syphilis	...	...	24
Gonorrhœa	...	...	40

who ceased attendance after completion of treatment, but failed to submit themselves to final tests :—

Syphilis	...	...	33
Gonorrhœa	...	...	73

Transferred to other Clinics :—

Syphilis	...	...	14
Gonorrhœa	...	...	37

Transferred from other Clinics :—

Syphilis	...	...	10
Gonorrhœa	...	...	23

Those who completed treatment and submitted themselves to repeated tests, and were clinically and pathologically proved to be cured :—

Syphilis	...	...	24
Gonorrhœa	...	...	140

The patients described as cured are submitted to exhaustive tests, in accord with the rules laid down by the Ministry of Health.

Points of Material Interest.

The new Venereal Wards were opened in August and serve the purpose infinitely better than the old isolation block.

The new patients presenting themselves for treatment show an increase of one over last year.

It is highly satisfactory to note that a great increase of those suspecting themselves should have come to the Clinic to find that they are free from evidences of either of these diseases.

Every effort has been made to persuade and encourage patients to persist in their attendances for treatment until all symptoms have disappeared and the necessary tests have been made to prove their cure complete.

The Board of Governors of the Royal Infirmary have afforded me every assistance and facility for the efficient working of the Clinic, and the new In-Patient Department for Venereal Diseases is of great assistance in the general treatment of the In-Patients and those requiring intermediate attention.

My thanks are due to my Medical and Lay helpers for their zealous and loyal support in the conduct of the Clinic.

HENRY J. BLAKESLEY, F.R.C.S., Eng.

Medical Officer in Charge,

Male Venereal Clinic, Leicester Royal Infirmary.

Report relating to the Female Venereal Diseases Clinic at the Leicester Royal Infirmary for the year 1928.

Out-Patients.

The total number of out-patients seen for the first time at the Leicester Royal Infirmary Venereal Diseases Clinic in 1928 was 423.

Of this number 123 were from the County.

Of these 41 suffered from Syphilis, 44 from Gonorrhœa, and 38 showed no signs of disease.

In the Out-Patient Department the total (i.e., new and renewed) attendances of patients numbered 9,558.

Of the 2,658 Out-patients from the County 1,636 were suffering from Syphilis, 980 were suffering from Gonorrhœa, and 42 showed no signs of disease.

There were 2,066 attendances for intermediate treatment; 1,931 of these being on account of Gonorrhœal infection and the remaining 135 of Syphilitic.

The total number of cases from all sources discharged after observation and completion of treatment was 175. Also 28 cases were transferred to other Centres for continuation of treatment.

Treatment for Syphilis.

Syphilis has been treated by administration of drugs :—

- (a) By Injection.
- (b) By Mouth.
- (c) By Inunction.

The drugs used were :—

Intravenous Neokharsivan, in the majority of cases

Stabilarsan in special conditions, and

Intramuscular Sulfarsenol, Metallic Bismuth and Thiostab.

916 injections were given to County patients, and 195 individual patients were so treated.

As a course, about 8 to 12 weekly injections were given, and, at the same time, drugs, viz., Mercury, Potassium Iodide, and Bismuth were administered by mouth.

Infants born of infected mothers are treated, whether signs of disease are present or not.

No case of Congenital Syphilis has been discharged. The parent of each one is told to bring the child up at regular intervals for observation.

Treatment for Gonorrhœa.

The treatment of Gonorrhœa involves local disinfections by dressings, tampons, pessaries, or douches made as frequently as possible; tonics are given for the general anæmia always caused and alkalies used locally—generally in the acute cases.

Irrigation of the bladder in special cases is being done with some success, and instillation of sterilised glycerine into the uterus is being tried in other special cases.

Amongst the cases admitted were :—

Adults :

Abdominal Operations for Complications of Gonorrhœa...	18
Acute Abdominal Inflammation, subsiding without operation	14
Acute Gonorrhœal Rheumatism	3

Children :

Acute Gonorrhœal Vaginitis	10
Ophthalmia Neonatorum	6
Syphilitic Eye Infection causing temporary blindness ...	6

Special Cases :

Syphilis in acutely infectious stage	...	...	...	...	...	...	6
Acute Jaundice	...	...	...	...	...	...	2
Acute Dermatitis	...	...	...	...	...	...	2
Confinements	...	...	...	...	...	...	14

Note :—In all these confinement cases the baby is doing well.

The number of days of treatment of County patients has been 1,072—359 for Syphilis, 671 for Gonorrhœa, and 42 in Non-Venereal cases.

**Report on Female Clinic for Venereal Diseases at St. Mary's Home,
1, Ashleigh Road, Leicester.**

The cases suffering from Venereal Diseases treated at St. Mary's Home are specially chosen.

These are young unmarried girls who are unsuitable for special reasons to be treated at the Clinics at the Royal Infirmary.

The work is still carried out in three parts :—

- (1) Work in the Hostel which contains 9 beds with additional cots for the babies.
- (2) Work at the Clinic held on Thursday evening. There is also a Monday morning Clinic for Hostel cases only.
- (3) Daily work carried out by the Sister in Charge as prescribed.

The total number of new cases from all sources during the year is 47 adults and 9 babies. The total attendances numbered 384.

Five adult cases and one baby were admitted to the Hostel from the County.

Out-Patients.

The number of attendances at the Clinics was 147.

Attendances at other times for prescribed treatment numbered 318.

This year a special attempt has been made to enable the girls from the County to attend more frequently for treatment. The Sister in Charge now makes arrangements to give necessary treatment at hours in the days when it is possible for the patient to attend.

By this means the number of attendances has been more than doubled.

BESSIE W. SYMINGTON, M.D., B.S. (Lond.),
Medical Officer, Female Venereal Clinic.

SANITARY CIRCUMSTANCES OF THE COUNTY.

(1). WATER.

With the continued development of housing schemes in Urban districts, water mains have been extended to cope with the increased demand for a constant supply.

The water supply for Market Harborough Urban District has been augmented during the year by the construction of an additional well 54 feet deep. The Sanitary Inspector reports "It seems likely that an increase in the supply due to this Well of 100,000 gallons a day may be realised, making a total from the combined water supply of 317,000 gallons per day, which it is estimated may be adequate for a considerable number of years."

The following are the principal extensions which have taken place in Rural Districts :—

Barrow-on-Soar.

Arrangements have now been completed for the extension of City mains from Anstey to supply the village of Newtown Linford.

Market Bosworth.

The village of Ratby is now supplied by Leicester water. 82 connections have now been made up to date.

Blaby.

In addition to the developments in Braunstone Estate extensions of the Leicester main supply have been made in Blaby and to the villages of Huncote and Croft.

Lutterworth

The town of Lutterworth suffered from some shortage of water last year, but a new well is now being sunk to augment the supply.

Extensions of the water supply are proceeding at Measham, Oakthorpe, and Donisthorpe.

(2). RIVERS AND STREAMS.

The River Soar is the main watercourse in the County, and follows a general direction S.W. to N.N.-W. It rises in the neighbourhood of Ullesthorpe and flows through Leicester City and the Northern portion of the County, which it leaves at its junction with the River Trent, a few miles East of Sawley. There is one main tributary, the River Wreake, which flows through Melton Mowbray and joins the Soar at Cossington. All the tributaries at some point receive sewage effluents; and in an endeavour to keep some sort of check on these effluents, inspections are made and samples of water taken for analysis at intervals during the year.

On 14th November a Ministry of Health Enquiry was held at Market Harborough. It was proposed to borrow an amount of £2,800 for the purpose of flood prevention of the River Welland. The scheme provided for the cutting of a new flood channel to short-circuit a sluggish and tortuous section of the River, and to provide for the more rapid withdrawal of flood water from the low-lying parts of the town.

Specimens of water were taken on two occasions, viz., July and September, from twelve different points of the River Soar for the purpose of estimating the Dissolved Oxygen Content. These estimations are carried out on behalf of the Ministry of Agriculture and Fisheries, for the purpose of their annual hydrographical survey of the Trent water-shed. These surveys form part of a general investigation of the degree of purity of the waters of the Trent.

(3). DRAINAGE AND SEWERAGE.

During the year the Senior Medical Officers paid 43 visits to the various Sewage Farms in the County.

I am glad to report that very considerable improvements have been made in the conditions of nearly all the farms on which I was obliged to report adversely last year. In some cases no actual constructive work has been begun, but plans have been drawn out and extensions and improvements in existing works are under consideration.

The following notes refer mainly to sewage works in which defects were found during 1928.

After each inspection of a Sewage Farm a laboratory analysis of the effluent is made. If it is found that the effluent discharging into a neighbouring stream is likely to be a source of danger to the community, the Local Authority is notified of this by the Public Health Committee. A summary of the Medical Officer's report is transmitted to the Authority who are asked to take steps to remedy the pollution.

ANSTEY SEWAGE FARM.

With the erection of new houses which drain into this farm, considerable strain has been put on these works. Some improvements have been made, but I consider that further steps will be necessary as the population in this area increases; particularly does this apply if houses in the direction of Cropston are connected up to this farm.

ASHBY-DE-LA-ZOUCH :

The modus operandi on this farm consists almost entirely of broad irrigation, and very little provision is made for settling of the crude sewage. From an agricultural point of view the farm is well kept, but it is questionable whether the sewage is being distributed over a sufficient extent of land to allow of adequate purification. Laboratory analysis shows a considerable degree of pollution at the outfall.

Instructions have recently been given to a local firm of Civil Engineers to report on the drainage of the whole district, and to advise what improvements may be made in the working of the farm.

BARROW-ON-SOAR :

Cleansing operations on the dyke which takes the effluent have been carried out during the year, and the farm continues to work efficiently.

BARWELL :

The new Sewage Works in connection with this village have been completed. The problem of sewage disposal at Barwell may be considered as solved for many years to come.

BLABY AND WHETSTONE :

This farm has been in an unsatisfactory condition for a considerable time. On the date of inspection matters were found to be in a state of transition, as new modern filters were in the course of construction close to the river. When the new works have been completed there is every reason to believe that the present unwholesome condition of the farm will be remedied.

BIRSTALL :

I reported adversely on this farm last year, and pointed out that on account of the large number of houses recently erected in the district the state of the effluent has been going from bad to worse. A new scheme of sewage disposal, however, has been prepared and approved by the Ministry of Health. I hope to be able to present a more favourable report after the next inspection.

COUNTESTHORPE :

On account of recent housing development it has become necessary to formulate a new sewerage scheme for the village. The construction of sewers and works is now proceeding.

DESFORD :

An enquiry was held during 1928 for the purpose of borrowing money to provide sewage disposal works for this village. Difficulties were encountered in the preparation of a comprehensive scheme, and I understand that the Ministry of Health are still considering the question.

EARL SHILTON :

Excellent progress was made during the year 1928 with the construction of the new sewage works. The scheme is similar to that which has been completed at Barwell, and a good effluent may be confidently expected in 1929.

GLEN PARVA AND LUBBESTHORPE :

A complete scheme of sewage disposal has been prepared for this area. Houses in the northern section have been connected with the Leicester City sewers. For the central area new disposal works have been constructed and brought into operation. A pumping station has been constructed to carry the sewage from the southern part of the district to the central works.

HALLATON :

The sewage from this village passes by gravity to a small rectangular area fenced off from a field. Here it appears to pass through a settling tank and a covered septic tank, but on the occasion of the Medical Officer's visit the works were very much overgrown with nettles, and it was difficult to discover the exact state of affairs. The sewage is subsequently distributed over the remainder of the field and passes into the stream. The arrangements for distribution seem to be quite inadequate and consequently the stream is heavily polluted by what is practically crude sewage. It is suggested that the tanks be cleaned out, and new grips made so as to utilise more fully the drainage area.

HARBY SEWAGE FARM :

As the result of a visit to this farm a communication was sent to the local Sanitary Inspector to investigate the conditions, and steps were taken to improve the effluent which passes into a neighbouring stream known as Stroom Dyke.

KIBWORTH :

This farm was visited on August 8th, 1928. A specimen of water taken from the effluent dyke, near its junction with the main stream on the Leicester-Market Harborough Road, showed considerable pollution. It was evident that the land treatment at the farm was not efficient. The matter was reported to the Market Harborough Rural District Council, and instructions were given by them to the Inspector to utilise the land more extensively.

LUTTERWORTH :

When this farm was inspected in August, 1928, it was observed that no material change had taken place since the previous year. The old type of contact bed does not make for efficient distribution of the crude sewage, and the land drainage appears to be faulty. A wide lagoon of sewage was found close to the final effluent.

MARKET HARBOROUGH.

In view of the great strain imposed in recent years on these sewage works the Authority resolved to extend the area of land filtration by taking in a new field lying on the southern bank of the River Welland. This will, no doubt, improve the conditions, but it is doubtful whether it will solve the central problems of dealing with trade waste and providing sufficient settling accommodation.

MEASHAM.

The present sewage system of Measham is unsatisfactory, and as the effluent discharges into the brook there is some pollution of the stream on the Oakthorpe side of the village into which sewage after irrigation on the land passes. Also the sewage effluent which passing through the Recreation Ground discharges into the Canal is causing pollution.

It is highly desirable that a full sewage scheme should be propounded for the whole of the village of Measham in the near future.

MOUNTSORREL :

Several visits were made to this farm during the year, and its unsatisfactory condition was the subject of an adverse report to the Committee.

Considerable improvements were made, however, later in the year, and the sewage is now receiving treatment which should serve in some measure to diminish pollution of the River Soar. The sewage on reaching the farm is now conveyed to one of the two settling tanks which are used alternately for a month each, and filled to a level of about three feet. Any liquid beyond that depth goes over an iron plate into a second chamber which contains about two tons of large coke. After passing through this it goes to a second smaller settling tank, and from there to a main drain which carries it over the land for further treatment. The system works well at the moment, but it will become necessary to arrange for further settling accommodation before long.

The old drain at the bottom of the field has been repaired and covered so that the effluent now passes through the inspection chamber. There is no doubt, however, that the land is sewage sick; samples taken at the beginning and at the end of land treatment show that no further purification has taken place.

OADBY :

The modern sewage disposal works of this Urban District were completed in 1924. Since that time the District has grown rapidly; nearly five hundred new houses have been erected, and a large number of conversions to the water-carriage system have been carried out. It consequently became necessary to formulate a scheme for extension of the disposal works—the estimated cost of this scheme was £3,932. A Ministry of Health enquiry was held on December 11th, 1928, when the proposed extension was approved.

QUORN :

I am glad to report that a striking improvement has been made in the condition of this farm. Sedimentation tanks have now been constructed on the site of the old primary contact beds, the secondary beds have been replaced by modern filters with revolving sprinklers. The whole farm is now in good condition, and the land which lay sodden for many years has now been thoroughly drained and put in order.

RATBY :

An inspection on August 14th, 1928, the following report was made :

“The sewage passes through two small and inefficient ‘septic’ tanks, and is distributed thence over a confined area of land which is incapable of carrying out any process of purification. The effluent is practically crude sewage, and the brook into which it falls is grossly polluted.”

It is clear that a new scheme of sewage disposal is necessary for this village.

SYSTON :

I reported adversely on this farm last year, and conditions were unchanged at the inspection on 3rd August, 1928. A new scheme of sewage disposal, however, has been prepared and provisionally approved by the Ministry of Health.

THORPE SATCHVILLE :

In July, 1928, I reported that the stream into which this effluent flows was grossly polluted.

“The land does not appear to be acting as an effective filter, and there is a very strong and unpleasant smell in the neighbourhood of the farm.”

The matter was reported to the County Committee and forwarded to the Melton Mowbray Rural District Council. Since then the system of drainage has been improved by filling in the old grips and making new channels. The works generally have been cleansed and put in order.

THURMASTON :

The provision of sewage works for this district is under consideration, and an application has been made to the Ministry of Health for the purpose of formulating a new scheme for sewage disposal.

Visits to other sewage farms in the County showed these to be satisfactory on the day of inspection.

(4). CLOSET ACCOMMODATION.

The reports of the District Sanitary Inspectors for the year 1928 show that conversions to the water-carriage system are proceeding at a moderate pace. 226 conversions were made at Loughborough, and in most of the Urban districts very few of the obsolete types of closet remain.

The conditions which prevail at Coalville, however, indicate that the work of conversion requires to be carried out more speedily. There is still a very large number of privies and pail closets.

In the Rural districts some progress has been made in the development of the water-carriage system. 115 conversions were carried out in the Barrow district and 104 in the Blaby district.

There is still a very high proportion of privies and pail-closets in Rural districts, but one may hope that the closure of wells and the introduction of water mains will shortly lead to a great increase in the number of conversions to the water-carriage system.

(5). SCAVENGING.

Destructors are in operation at Loughborough, Market Harborough, Blaby, Melton Mowbray, and Quorn. Shallow burying of refuse on the sewage farm is adopted at Hinckley. In Coalville Urban District dry refuse and rubbish tipping is carried out by the Bradford System, and two areas of 30 and 8 acres respectively have been purchased near the centres of Coalville and Hugglescote for this purpose.

(6). SANITARY INSPECTION.

The following information has been extracted from the reports of the District Sanitary Inspectors :—

	Urban.	Rural.	Total.
Premises visited	8,575	10,275	18,850
Defects or nuisances discovered	5,952	3,341	9,293
Complaints received	536	738	1,274
Inspections for all purposes	28,292	19,524	47,816
Notices served :—			
Informal	1,914	1,964	3,878
Formal	328	282	610
Summonses issued	5	4	9
Convictions obtained	3	3	6

Blaby :—

The Sanitary Inspector reports as follows :—

“No satisfactory system is being adopted to reduce the number of sanitary pails, and this is, owing to the difficulty of collection and disposal, becoming a very serious matter.

The collection of ashes, etc., goes on in the old way, taken to dumps and burnt (sometimes); the two small incinerators at the Blaby Works only reduce the bulk about 30 per cent. I think the Parishes should join a centralised system of collection and disposal either by pulverising for farm use or refuse destructors, and have recommended this to one of my Committee, and it will shortly come up for consideration by the Council.

I am recommending the adoption of part of the P.H. Amendment Act, as necessary for the conversion of the pan closets to water-closets.”

(7). PREMISES AND OCCUPATIONS WHICH CAN BE CONTROLLED BY BYE-LAWS OR REGULATIONS:—

Last year I called attention to the condition of a number of tents, vans and sheds which were used for human habitation. I pointed out that the majority of them were overcrowded, insanitary, dilapidated, and not weather proof. I am glad to report that during the year energetic action has been taken by several District Authorities, with the result that they have been able to condemn the worst types and secure their removal.

The following excerpts from the Reports of Sanitary Inspectors give some account of the present situation:—

Loughborough :—

130 inspections were made to eleven vans. In many cases the ground on which the vans were standing was not paved; no water supply was provided, and there was no sanitary accommodation or receptacle for household refuse. Statutory notices were served, and then proceedings commenced in the Police Court. All the vans have now been removed.

Billesdon Rural District :—

In this district there is only one permanent van, which is well kept.

Several movable vans pass through the district, but seldom remain for more than a few days.

Coalville Urban District :—

“There are 6 vans in the district. Legal action is pending with regard to two of these vans and one shed for contravention of the bye-laws and overcrowding. Settlement is discouraged, and the bye-laws in force are worked to their fullest limits to enforce this. Frequent trouble is caused by wandering vans which settle for two or three weeks and then clear out before their faults can be brought home to them.”

Barrow-on-Soar Rural District :—

94 vans are under inspection. “The District Council is considering the question of framing regulations for their control.”

Market Bosworth Rural District :—

“The 10 vans in this district are reported to be in a fair condition. Action is taken from time to time to discourage settlement.”

Blaby Rural District :—

“34 vans were in occupation at the beginning of the year, and all were under very insanitary conditions. 117 inspections were made and action was taken in 34 cases. Six notices were served for cleansing, 2 for over-crowding, 16 on account of defective closet accommodation, and 10 for deficient water supply. Only 4 vans remained in occupation at the end of the year.”

Ashby Urban District :—

“4 vans—reported as insanitary. “The Council propose to put in force bye-laws relating to these vans and sheds.”

Hinckley Urban District :—

“6 vans—1 of these was closed during the year by the owner on account of its bad condition. One is a temporary structure used by a Contractor. The others are in a fairly satisfactory state.”

Market Harborough :—

“The number of vans in this district varies considerably. 19 inspections were made; 6 encampments of van dwellers were removed on account of contravention of the bye-laws. One notice board was erected to prevent camping on the site—with good results. In eight instances action was taken to insist on proper cleansing and the removal of rubbish.”

HOUSING.

Number of New Houses erected during the year:—

DISTRICT.	With State Assistance under the Housing Acts.		Total including numbers given in columns 2 and 3.
	By Local Authority.	By other Bodies or Persons.	
(1)	(2)	(3)	(4)
Urban Districts :			
Ashby-de-la-Zouch	—	2	6
Ashby Woulds	—	2	2
Coalville	—	44	52
Hinckley	—	134	175
Loughborough	120	69	189
Market Harborough	12	24	47
Melton Mowbray	—	24	26
Oadby	—	23	72
Quorn	—	8	15
Shepshed	9	3	12
Thurmaston	—	20	29
Wigston Magna	20	68	94
Total	161	421	719
Rural Districts :			
Ashby-de-la-Zouch	—	16	36
Barrow-on-Soar (1)	86	54	165
(2)	20	86	131
Belvoir	—	—	—
Billesdon	—	85	155
Blaby	—	584*	647*
Castle Donington	—	5	5
Hallaton	—	—	—
Hinckley	70	72	160
Loughborough	—	17	17
Lutterworth	—	7	11
Market Bosworth	—	39	46
Market Harborough	12	3	17
Melton Mowbray	—	8	17
Total	188	976	1,407
Total, Whole County	349	1,397	2,126

*Does not include houses built by the City of Leicester on the Saffron Lane and Braunstone Housing Estates.

(b) Defective Houses.

Number of Dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for habitation	197
Number of Dwelling-houses (exclusive of those referred under the preceding heading) found not to be in all respects reasonably fit for human habitation	1,409
Total found defective	1,606
Number of Defective Dwelling-houses rendered fit in consequence of :—	
(a) Informal action	1,280
(b) Service of formal notices	508
	1,788
Number of Dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	10
Number of Dwelling-houses in respect of which Closing Orders were made	64
Number of Dwelling-houses in respect of which Closing Orders were determined, the Dwelling-houses having been rendered fit	10
Number of Dwelling-houses demolished in pursuance of Demolition Orders	20

HOUSING (RURAL WORKERS') ACT, 1926.

From October 1927 to December 1928 applications for grants were made in respect of 23 dwellings. Of these 4 were refused, 5 were withdrawn by the applicant, and one is under consideration. Grants amounting to £1,015 were made in respect of 13 dwellings.

INSPECTION AND SUPERVISION OF FOOD.

(a) MILK SUPPLY.

Milk and Dairies (Consolidation) Act, 1915.

During 1928, infection of milk by tubercle bacilli was reported in 13 instances—7 from the London County Council, 1 from Willesden Urban District Council, 4 from Leicester City, and 1 from Birmingham Health Authority. Following these reports, 277 animals were inspected for biological examination. 38 of the samples were tested at the Cambridge University Laboratory, and 4 at Birmingham University Laboratory; the results being as follows :—

		Positive.	Negative.
From Single Animals	...	33	7
Bulk Samples	.....	9	4
		—	—
Total	42	11	31
		—	—

The seven cows giving a positive result were dealt with by the Council's Veterinary Inspector, under the Tuberculosis Order of 1925.

Milk and Dairies Order 1926 (Part IV.).

Tuberculosis Order, 1925.

Both these Orders are administered by the Diseases of Animals Sub-Committee of the County Agricultural Committee.

GRADED MILKS.

Of the 17 licenses granted for the production of "Grade A" milk during 1928, 16 were renewals given to previous holders. In addition the Ministry of Health has licensed two producers for "Certified Milk" and one for "Grade A" (Tuberculin Tested). Routine inspections of the premises of "Grade A" license holders are carried out regularly by the County Medical Officer. Samples of milk are collected from time to time both at the farm and in the course of delivery, and examined in the County Laboratory. The result of the examination of 76 samples of "Grade A" milk in the County Laboratory were :

Within Standard	73
Below Standard	3

In cases where the samples are found to be below standard the County Medical Officer visits the farm and in co-operation with the producer tries to get at the root of the trouble.

The Health Authority of the City of Leicester has collected in addition 79 samples of milk from County "Grade A" producers with the following results :—

Within Standard	77
Below Standard	2

MILK, AND ITS TREATMENT IN THE HOME.

It has long been felt that there is a real need of public education in the care of milk after it has been delivered to the home. Some of those who complain of dirty milk, or of its rapid souring in the home are themselves responsible for these conditions by failing to take elementary precautions for its preservation in a pure and wholesome condition. It was for this reason that the Education, Maternity and Child Welfare, and Agricultural Departments of the County Council decided to publish a pamphlet on "The Treatment of Milk in the Home." A copy of this pamphlet is given by the Health Visitors to the mother of each child visited, under the Notification of Births Act, and supplies are delivered to the Infant Welfare Centres for distribution among the mothers.

(b) SALE OF FOOD AND DRUGS ACT, ETC.

This and kindred Acts are administered by the County Police. Dr. Bernard Dyer, the County Analyst, reports as follows :—

"During the year we had 86 samples of milk and 9 samples of cream. No contravention was detected either of such part of the Milk and Cream Regulations as still survive or of the Regulations relating to Preservatives or Colouring Matters."

BACTERIOLOGICAL AND CHEMICAL WORK.

During 1928 the number of examinations was the largest since the commencement of the Laboratory in 1920, and the following figures show the steady increase which has taken place year by year :—

1928	1927	1926	1925	1924	1923	1922	1921	1920	Total.
4890	4510	3600	3561	3170	2774	2531	3379	2449	29864

The following is a summary of the examinations made during the year under review:—

	Pos.	Neg.	Total.
Throat Swabs for Diphtheria	325	1430	1755
Sputa for Tubercle Bacilli	497	1009	1506
Bacteriological Milk Examinations	—	—	756
Hair for Ringworm	167	91	258
Sewage and Water Analyses	—	—	166
Blood Samples for Wasserman Reaction	35	86	121
Urine, General and Bacteriological	—	—	94
Widal Tests for Typhoid Fever	7	55	62
Films for Gonococci	31	23	54
Urine for Tubercle Bacilli	5	32	37
Fæces for Bacillus Typhosus	—	26	26
Differential Blood Counts	—	—	7
Urine for Bacillus Typhosus	—	4	4
Throat Swabs for Meningococci	—	2	2
Miscellaneous	—	—	42
			4890

These figures show an increase of 380 on last year, and are double the number in 1920 which was 2,449. The chief increases have taken place in the examinations of throat swabs for diphtheria (1,755), sputa for tubercle bacilli (1,506), and the bacteriological examinations of milk samples (756). In 1920 the number of throat swabs examined was 971, sputa for tubercle bacilli 645, and milk examinations nil—these last-named were not started until 1925.

During the last nine years the total number of swabs examined for diphtheria is 9,701, sputa for tubercle bacilli 9,026, and milk examinations 3,318. The total number of examinations made is now 29,864.

Diphtheria.

The number of swabs examined for Diphtheria, 1,755, is an increase of 316 on those examined in 1927. These were received from the following sources:—

Isolation Hospitals	...	...	...	...	...	852
General Practitioners	...	...	...	...	...	689
Examinations of School Children	...	...	...	...	...	158
Mowsley Sanatorium	...	...	...	...	...	56

The large number of swabs sent by the Isolation Hospitals is due to the fact that it is deemed necessary to keep patients in Hospital until they are free from infection, hence most of them had two, three, and often more swabs taken from their throats. Those sent by General Practitioners were for diagnostic purposes; those from school children and Mowsley Sanatorium were taken when outbreaks of Diphtheria had occurred, with a view to detecting possible "carriers" of the disease, and excluding them from school to prevent its further spread. Of the 214 swabs taken from these school children and the patients in the Sanatorium, six were positive, and the children were given suitable treatment until free from the germs of the disease.

Tuberculosis.

As in the case of Diphtheria an increase has taken place in the number of specimens of sputa examined for the Tuberclle Bacillus. In the year 1928 the number was 1,506, and in 1927, 1,350. These were received from the following :—

Tuberculosis Medical Officers	...	...	...	...	949
General Practitioners	...	...	...	...	551
D.C.M.S. Ministry of Pensions	...	...	...	...	6

The increase has taken place in the number of specimens sent by the Tuberculosis Medical Officers; those from the other two sources both show a slight decrease.

In addition to the foregoing, 37 specimens of urine were examined for the presence of T.B., and five of them were positive.

Milk Examinations.

The total number of milk samples received for examination was 756, a decrease of four on 1927, and an increase of 26 on 1926. They were received from the following sources :—

Urban Districts	...	...	...	...	264
Rural Districts	...	...	...	...	357
"Grade A" Production	...	...	...	...	93
For Tuberculosis (Biological)	...	...	...	...	42

In connection with milk received for examination for T.B., these were the result of inspections under Section IV. of the Milk and Dairies Act on reports being received that specimens of milk from

this county had been found to be tuberculous. Twelve farms were visited by Mr. Parr, F.R.C.V.S., with one of the staff of the Health Department, and 42 samples of milk from suspicious animals were sent to the Institute of Animal Pathology, Cambridge, and four to the University of Birmingham. Eleven of them were found to be Tuberculous.

Those taken in connection with "Grade A" milk were from producers and others desirous of obtaining "Grade A" licenses.

As in the years immediately preceding 1928, the samples from the various Urban and Rural Districts have been classified into one of the four groups—Good, Fair, Moderate or Bad—according to the bacterial count and the B. Coli content.

Particulars of these standards have been given in previous reports. The results of this year's examinations are here summarised :—

	Good.	Fair.	Mod.	Bad.	Total.
Urban Districts	154 (53.3%)	64 (24.2%)	7 (2.7%)	39 (14.8%)	264
Rural Districts	211 (59.1%)	77 (21.6%)	9 (2.5%)	60 (16.8%)	357
Combined Districts ...	365 (58.%)	141 (22.7%)	16 (2.6%)	99 (15.9%)	621

The following figures show the percentage of samples which were "Good" in previous years :—

1926	1927	1928
46.7	47.1	58.8

It is evident from the above that the standard of cleanliness in the production of milk in this County is improving, as a result of these systematic semi-formal examinations.

There are 12 Urban and 13 Rural Districts in the County, and during the four years that the scheme has been in operation, with the exception of three of the Rural, all the districts have now sent samples for examination, and the following shows the numbers sent :

Urban.	*Rural.	Total.
1,207	1,240	2,447

An analysis of the combined results shows that 1,226 samples, or over 50 per cent. could be classified as "Good."

* This Rural District figure includes 9 samples examined for the Uppingham R.D. at their request during 1928.

A detailed report has been prepared and forwarded to the Clerk of the Council of each district.

Sewage and Water Analysis.

During the year 166 samples of water and sewage effluents have been examined. As in the past five years samples were taken and examined for the dissolved oxygen content, in conjunction with the Ministry of Agriculture and Fisheries, of the Rivers Soar and Wreake, for the purposes of their annual Hydrographical Survey of the Trent water-shed.

Hair for Ringworm.

The number of specimens of hair examined for Ringworm was 258, a slight increase on the previous year. These were nearly all received from the School Medical Officers and Nurses. Many of the children affected now attend at the Laboratory on Saturday mornings for these examinations.

Cerebro-Spinal Fever.

No specimens of Cerebro-Spinal Fluid were received for examination from suspected cases of Cerebro-Spinal Fever.

Typhoid Fever.

62 samples of blood were examined by the Widal Test during the year, of which 7 were positive. In addition to these, 30 samples of faeces and urine were also examined, mostly from Isolation Hospitals, to ascertain whether the patients were free from infection before returning to their homes.

Urine Analysis.

In addition to the samples of urine already reported on under the heading of Tuberculosis, 94 samples were examined chemically and microscopically.

Venereal Diseases.

The examinations of specimens of Venereal origin are given below :

	Pos.	Neg.	Total.
Blood for Wassermann Reaction	35	86	121
Films for Gonococci	31	23	54

These specimens were received from the following sources :—

	Blood for W.R.	Films for G.C.	Total.
Loughborough V.D. Clinic	22	23	45
General Practitioners	99	31	130

(The examination of blood for the Wassermann Reaction is carried out at the Leicester Royal Infirmary).

GENERAL REMARKS.

The remarks in my last Annual Report regarding the value of the Laboratory services to the General Practitioners and the County generally are emphasised more than ever by the remarkable increase in the number of examinations carried out during the year. The Laboratory is now thoroughly well established, and is a very valuable adjunct to the Health Department. It is also revenue producing, inasmuch as the Isolation Hospitals Committee pay for the throat swabs examined from their Hospitals, and the Tuberculosis Committee pay for the examinations of specimens of sputa. The various Urban and Rural Districts also pay for each sample of milk examined for them.

Signed) J. A. FAIRER,

County Medical Officer of Health and Bacteriologist.

TUBERCULOSIS.

The following is the report of the Senior Tuberculosis Medical Officer :

1. *General.*

Hippocrates, the Father of Medicine, 400 years before Christ, realised the importance of fresh air, sunlight, rest, exercise and diet in the treatment of disease; and in the island of Cos, where he practised, patients were treated in his Solarium, much as they are in a Sanatorium to-day.

In the Dark Ages these important means to health were disregarded, and their employment being considered a species of Pagan Nature-worship, they fell into disuse.

So, for long ages, fresh air was excluded from all dwellings, ventilation was extremely rudimentary, and for the sick the stuffy and heated atmosphere of unventilated rooms was thought to be essential. Naturally, diseases of the chest, accompanied by cough, were looked upon as peculiarly suited to this form of procedure, and the stuffier and closer the air in the sickroom, the better chance of recovery the unfortunate case was believed to possess.

In the middle of the nineteenth century, that great woman, Florence Nightingale, protested against the lack of air and sunlight in Netley Hospital, but in vain.

Previous to this, in 1830 George Bodington, of Warwickshire, established an Institution for Tuberculosis, advocating the use of cold, dry air, open air exercises, and plenty of food. So fierce was the opposition to this pioneer that his Institution was closed down, and re-opened as a Lunatic Asylum.

However, Brehmer, at Gorbersdorf in Germany, in 1858, started the first Sanatorium for the treatment of Tuberculosis, and the principle of fresh air as a means of cure for this complaint was established.

Trudeau, himself a consumptive, who had read the work of Brehmer in Europe, built the first Sanatorium in America in 1884.

That air plays an important role in the maintenance of health, as well as in the production of disease is no longer denied. At one time it was believed that excess of Carbon Dioxide in the air was responsible for the deleterious effects produced in those working or living in badly ventilated or overcrowded rooms. Now it is known that it is the three physical qualities, temperature, humidity, and motion of the air, which create the sense of well-being in the human body, and that a temperature of 68° F. and 50% humidity are more conducive to health than any other. Further it has been proved that the principal action of air in both acute and chronic respiratory diseases, is physical or mechanical rather than chemical, and that it is through the reaction of the skin rather than through the respiration that air produces its beneficent effects.

The existence of Sanatoria in their present form is an abiding proof of the established opinion that fresh air is essential in the treatment of Consumption. Now it is for this very reason that we should be careful not to over-estimate the value of air and make it the be-all and end-all in the treatment, to the exclusion of other important factors.

It is a common practice for cases suffering from Pulmonary Tuberculosis, and especially upon first coming under medical supervision, to be told "to get out into the open air as much as possible." This advice, in a climate such as ours, usually results in the individual walking mile upon mile, inhaling fresh air certainly, but coming home wearied and tired out. Dettweiler many years ago was the first man to discover that it was "rest and fresh air" that made for health, but in this country, except for a very limited time in the year, it is difficult to rest out of doors owing to the cold. The result is that the patient is driven to walking to keep the circulation going and to obtain the necessary warmth. Under

Sanatorium conditions matters are different, as the inmates gradually become inured to the cold, through living in a constant atmosphere, and not having to pass from a warm room into the outside air and back again.

Where it is a question of open air and excessive exercise, as against rest and ventilation, moderately good or otherwise, then in my opinion the latter course is much the safer to adopt. Nothing kills the consumptive more quickly than fatigue.

Certain classes of sufferers; such as those who are subject to bronchitis—many of whom are over 40 years of age—the weak and debilitated, and those getting on in life are unable to endure a Sanatorium regime during the cold months of the year, and unless they can be sent to warm climates such as the South of England, are better away from these Institutions, until the weather becomes milder.

For similar mistaken reasons as to the all-sufficing benefit of fresh air, many men are advised to give up indoor work, such as clerking, and to take up outdoor employment such as farm labouring. Generally speaking no advice could be more disastrous to the recipient. It cannot be stressed too thoroughly that light indoor work is infinitely preferable to hard work out of doors, and farm labouring and similar occupations mean hard work indeed.

It is significant that a well known Sanatorium, now being converted into a Colony for training youths between the ages of 14 and 19, will teach only two occupations, namely, clerking and gardening. Many a useful life has been thrown away in a pitiful attempt to do, in the open air, work that only a strong man could accomplish.

The advice to parents to allow their children—delicate and often pre-tubercular—to "run wild" is another example of mistaken judgment. Such children always require abundant rest, and it is the over-exercise, again mainly to get all the fresh air they can, which does them infinite harm, and too frequently lights up the latent tuberculosis that exists.

Similarly, children recovering from Measles, Whooping Cough and Influenza should not be allowed to be out in inclement weather, if they are to avoid, *inter alia*, Bronchitis, Pneumonia, and Tubercular Bronchial Glands.

Nor should we ever forget that the aged and those who are in a weakly state for any cause, by reason of their deficient circulation, cannot endure cold weather, and should be kept in a warm and constant atmosphere. The toll of deaths among old people during the recent influenza epidemic should bring this fact home to us.

The question of clothing is largely bound up with that of fresh air, for the temperature of our bodies mainly depends on the state of the atmosphere surrounding us and on the clothes which we wear, a nice balance being struck according to the seasons of the year. The beneficial effects of air have been seen to depend more on its action on the skin, than on the respiratory system. Hence it follows that the less clothes we wear, within reason, and always providing that a proper response is made on the part of the circulation, the healthier the individual.

But we must discriminate between the normal, healthy person, well-developed and strong, with a good circulation, digestion and appetite, and the thin, narrow-chested, anaemic, delicate type, whether child or adult. Unfortunately parents and the rest of mankind are too prone to "lump" everyone together and to mete out the same treatment to all and sundry. The strong and healthy and the young can wear a minimum of clothes, but the delicate and "those of riper years" need more protection from the rigours of our uncertain climate.

2. *Prevalence of Tuberculosis.*

The number of notifications of Pulmonary Tuberculosis has decreased by 45, and there is a decrease of 2 in the number of deaths. The figures for 1928 are:—Notifications 350, Deaths 203, Death Rate 0.70. The average numbers of the previous five years are:—Notifications 356, Deaths 208, Death Rate 0.75.

There were 117 Notifications of Non-Pulmonary Tuberculosis as against 101 in 1927. The number of deaths was 54 as against 70, and the Death Rate 0.19 as compared with 0.25 in 1927.

The total number of Notifications for 1928 is therefore 467 as against 496 last year, and Deaths 257 as against 275 in 1927, showing a decrease in both directions. The constant influx of Tuberculous cases from the City, particularly into the Saffron Lane and Braunstone Estates, increases the numbers both of notifications and of deaths.

3. *Details of the Scheme of Treatment.*

(a). **Hospital and Sanatorium Accommodation.**

The number of beds provided at the different Institutions will be seen on Table T.B. II. The pressure on the available beds has been fully maintained.

It has been found necessary, as in past years, to arrange for the admission of 40—50 cases to Institutions outside the County.

(b). **Proposed New Sanatorium (Markfield).**

The plans for the proposed new Sanatorium are now nearing completion. Several Sanatoria have been visited by the Chairman of the Public Health Committee, the Medical Officers and the Architect, and much valuable information has been secured.

Subject to the approval of the Ministry of Health and the County Council the scheme can now go forward, and it is to be hoped that the preliminaries being settled, the foundation stone will be laid and a thoroughly up-to-date and efficient Institution will be available in the least possible time.

(c). **Convalescent Home.**

Ten beds were again retained at the Charnwood Forest Convalescent Home. During the year 48 children, between the ages of 5 and 10 years were admitted, and their average length of stay was 62 days. These cases were classified as :—

Pre-Tubercular	...	...	...	...	...	38
Early Closed Tuberculosis	...	...	...	...	...	9
Convalescent Surgical Tuberculosis	...					1

Owing to outbreaks of Chicken-pox and Scarlet Fever, admission to the Home was delayed for a time, but nevertheless all the cases on the waiting list received treatment. The very valuable work which is being done at this delightful Institution could be extended if more beds were available.

(d). **Hospital Beds for Advanced Cases.**

The accommodation for this type of Tuberculosis is very inadequate. The six-bedded block at Melton Isolation Hospital has been full throughout the year, and several cases have been sent to outside Institutions. More beds for these cases are urgently needed, both in the interests of the unfortunate sufferers, and to prevent the spread of infection.

(e). Out-Patient Dispensary Work.

For details see Table I.

One or two points are worthy of mention in connection with this work.

3,533 attendances were made at the five Dispensaries, being 560 more than in 1927.

The number of attendances of Non-pulmonary cases at Orthopædic Out-stations for treatment or supervision is 111 as against 68 last year, while the attendances for light treatment have risen from 8 to 68. The number of X-Ray photographs of the chest has risen from 13 to 27, which figures do not include those taken in connection with the Residential Dispensaries or Sanatoria. The Tuberculosis Medical Officers have paid 724 visits, of which Dr. Coward paid 590 and Dr. Buchanan 134. In 1927, 436 visits were recorded.

The Health Visitors made 4,708 visits to notified cases.

(f). Domiciliary Work.

(i). Shelters.—The number of Shelters available for loan to patients is 62, and of this number ten were in temporary use at Mowsley Sanatorium, and 47 at patients' homes at the end of the year. The inspection of these shelters is carried out as heretofore by the County Nursing Association, to ascertain if they are being occupied and proper use made of them.

(ii). Nursing of Advanced Cases.—The County Nursing Association has carried out this work, and 4,045 nursing visits were made to 54 patients, the cost of the work being £161. In 1927, 2,624 visits were made to 34 cases at a cost of £114.

(iii). Extra Nourishment.—Approximately £141 has been expended on 24 patients. No grant of milk and eggs exceeded 5s. per week.

(iv). Additional help has been given in the following ways:—
Cost of Splints, Crutches, Surgical Boots, etc., for 14 patients—£30.

A scheme for Dental treatment has been formulated, and approved by the Ministry of Health. In this connection £9 has been expended on three cases. The object of the scheme is to provide dental treatment and dentures for suitable cases where lack of money prevents the patient

from obtaining these. Where the National Health Insurance make a part payment towards the cost, the Health Committee help with the remainder. £50 has been allotted for this work during 1929.

(g). Surgical Tuberculosis

Nineteen beds are available—Hinckley Residential Dispensary 7 and Mowsley Sanatorium 12. These have been fully occupied. In addition cases have been treated at Hospital of St. Cross, Rugby (3), St. Gerard's Hospital, Coleshill (4), Manfield Orthopædic Hospital (5), Heatherwood Hospital, Ascot (3), Royal Sea Bathing Hospital, Margate (1), Leysin, Switzerland (1), St. George's Hospital, London (1).

Surgical cases on leaving Institutions are treated by Mr. Lawson at the Leicester Royal Infirmary, and by Mr. Malkin at the Loughborough Cripples' Guild, and at the Coalville Orthopædic Clinic, according to the area to which they belong. Supervision is also maintained by the Tuberculosis Medical Officers at the appropriate Dispensary.

The Hinckley Cripples' Guild also afford assistance to local cases.

(h) After-Care Work.

The Rural Community Council has very kindly undertaken to form Welfare Committees for After-care work in various districts of the County. The scheme is only in its infancy, but it is hoped during the next year that several Centres will be formed and that the After-care of both tuberculous and orthopædic cases will become firmly established.

4. *Public Health Act, 1925, Section 62.*

No action has been taken under this section, which deals with the compulsory removal to Hospital of advanced cases of Tuberculosis.

(Signed) N. A. COWARD,

Senior Tuberculosis Officer.

F.B. 1. Return showing the Work of the Tuberculosis Dispensaries during the Year 1928.

Diagnosis.	PULMONARY.						NON-PULMONARY.						TOTAL.					
	Adults		Children		Adults		Children		Adults		Children		TOTAL		TOTAL		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
A.—New Cases examined during the year (excluding contacts):—	125	152	16	12	18	15	22	14	143	167	38	26	26	4	4	26	4	41
(a) Definitely tuberculous	35	29	7	4	1	...	...	...	36	29	7	7	7	1	1	7	1	41
(b) Doubtfully tuberculous	57	54	65	41	...	...	...	...	57	54	40	53	65	65	64	65	64	64
B.—Contacts examined during the year :—	8	9	5	4	1	...	2	...	9	9	7	7	7	4	4	7	4	22
(a) Definitely tuberculous	4	2	7	1	...	...	...	...	4	2	...	...	40	40	40	40	40	40
(b) Doubtfully tuberculous	29	40	53	64	...	...	...	...	29	29	40	53	65	65	64	65	64	64
C.—Cases written off the Dispensary Register as	42	50	21	18	...	5	3	4	42	55	24	24	24	24	24	24	24	22
(a) Cured .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error)	41	27	26	10	...	...	1	2	41	27	27	27	27	27	27	27	27	12
D.—Number of Persons on Dispensary Register on December 31st :—	603	599	138	137	59	39	74	48	662	638	212	212	212	212	212	212	212	185
(a) Diagnosis completed	13	14	3	1	...	...	...	...	13	14	3	3	3	3	3	3	3	1
(b) Diagnosis not completed .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

1. Number of persons on Dispensary Register on January 1st, 1928 ... 1688
2. Number of patients transferred from other areas and of 'lost sight of' cases returned 88
3. Number of patients transferred to other areas and cases "lost sight of", 119 (40 N.F.T.*)
4. Died during the year 172
5. Number of observation cases under A (b) and B (b) above in which period of observation exceeded 2 months 40
6. Number of attendances at the Dispensary (including Contacts) ... 3553
7. Number of attendances of non-pulmonary cases at Orthopædic Outstations for treatment or supervision 111
8. Number of attendances, at General Hospitals or other Institutions approved for the purpose, of Patients for
 - (a) "Light" treatment 68
 - (b) Other special forms of treatment
9. Number of patients to whom Dental Treatment was given, at or in connection with the Dispensary ... 3
10. Number of consultations with medical practitioners :—
 - (a) At Homes of Applicants 134
 - (b) Otherwise 533
11. Number of other visits by Tuberculosis Officers to Homes 590
12. Number of visits by Nurses or Health Visitors to Houses for Dispensary purposes 4187
13. Number of
 - (a) Specimens of sputum, &c.,
 - (b) X-Ray examinations made in connection with Dispensary work
14. Number of Insured Persons on Dispensary Register on the 31st December 723
15. Number of Insured Persons under Domiciliary Treatment on the 31st December 890
16. Number of reports received during the year in respect of Insured Persons.—
 - (a) Form G.P. 17 269
 - (b) Form G.P. 36 129

* N.F.T. = "No further treatment necessary." The patients in this category have been quite well for a number of years, and will not visit the Tuberculosis Officer to be pronounced 'Cured.'

T.B. 2. SANATORIA, HOSPITALS, AND OTHER RESIDENTIAL INSTITUTIONS, FOR THE TREATMENT OF TUBERCULOSIS
(including Observation Beds at Dispensaries.)

Name and Situation of Institution. (1)	Class of Cases Treated. (2)	Number of Beds available for patients sent by the Council (2)	Number of patients sent by the Council who were under treatment on the 31st Dec., 1927. (3)	Number of patients sent by the Council during the year ended December 31st, 1928. (4)	Number of Patients sent by the Council who were discharged or died in the Institution during the year ended 31st December, 1928. (5)	Total number of days during which the Patients referred to in column 5 were resident in the Institution. (6)	Average number of days which the Patients referred to in column 5 were resident in the Institution. (7)	Number of Patients sent by the Council who were under treatment on the 31st December, 1928. (8)
Mowsley Sanatorium, Husbands Bosworth, Rugby.	Female Adults P Children P	50	25 14	89 27	79 26	11129 4433	140† 170||	35 15
	Female Adults S Children S	12	1 7	5 13	1 14	387 3347	387 239X	5 6
Coalville Residential Dispensary, Bakewell St., Coalville.	Female Adults P Girls P	8	6 ...	90 4	89 4	2446 136	27 34	7 ...
Hinckley Residential Dispensary, Manor House, Bond St., Hinckley.	Male Adults P Boys P	15	17 ...	74 3	79 2	4118 175	52 87	12 1
	Children S Male Adults S	7	1 4	6 10	4 11	524 1663	131 151	3 3
Creaton Sanatorium, Northampton.	Male Adults P Female Adults P	25-30	31 ...	67 3	72 3	10822 377	144§ 126	26 ...
T. B. Block Isolation Hospital, Melton.	Male Adults AP Female Adl'ts AP	3 3	2 4	13 6	13 8	1165 1131	86 141	2 2
Orthopaedic Hospital Manfield	Children S	?	3	2	1	314	314	4
Hospital of St. Cross, Rugby.	Male Adults S	?	1	3	1	210	210	3
Mount Vernon Hospital, Northwood.	Male Adults P	?	...	1	1	85	85	...
Royal National Sanatorium, Bournemouth.	Male Adults P	?	...	1	1	49	49	...
Grosvenor Sanatorium, Kent.	Male Adults P	?	...	6	6	713	119	...
Royal Sea Bathing Hospital, Margate.	Female Adults S	?	...	1	...	...	...	1
Heatherwood Hospital, Ascot.	Children S	?	3	...	...	...	...	3
Warwickshire Orthopaedic Hospital, Coleshill.	Children S	?	1	3	...	...	...	4
Holly Lane Hospital Sanatorium, Smethwick.	Male Adults P	?	2	7	9	916	102	...
Leysn, Switzerland.	Male Adults S	?	...	1	...	...	...	1
Totals ...		Average 144	122	435	424	44140	...	133

† 8 patients stayed less than 6 weeks—Average stay of remainder was 153 days.

|| 3 " " " " " " " " 189
§ 2 " " " " " " " " 147
x 1 " " " " " " " " 255

P Pulmonary Tuberculosis.
S Surgical Tuberculosis.
AP Advanced Pul. Tuberculosis.

T.B. 3.—Return Showing the immediate results of treatment of patients discharged from Residential Institutions during the year 1928.

Classification on admission to the Institution.	Condition at time of discharge.	Duration of Residential Treatment in the Institution.												TOTAL	
		Under 3 months.			3-6 months.			6-12 months.			More than 12 months.				
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.		
PULMONARY TUBERCULOSIS	Quiescent	9	2	3	15	8	5	10	14	10	...	1	...	77	
	Improved	8	4	1	3	3	1	4	6	7	...	...	...	37
	No material improvement	1	4	1	1	...	...	...	...	...	...	...	...	7
	Died in Institution	2	1	...	...	...	...	...	...	...	...	...	...	3
Class T.B. plus.	Quiescent	...	...	...	4	1	...	2	2	...	...	...	...	9
Group 1.	Improved	2	2	...	4	1	...	3	1	...	...	...	...	13
	No material improvement	1	...	...	1	...	...	1	...	...	...	...	...	3
	Died in Institution	1	...	...	...	...	...	...	...	...	...	1	...	2
Class T.B. plus.	Quiescent	...	2	...	1	1	...	5	1	...	...	...	...	10
Group 2.	Improved	3	3	...	9	6	...	6	8	...	...	...	...	35
	No material improvement	3	11	...	5	2	...	...	...	...	...	...	...	21
	Died in Institution	...	...	...	...	1	...	1	1	...	...	...	...	3
Class T.B. plus.	Quiescent	...	...	...	...	...	...	...	...	...	...	...	...	...
Group 3.	Improved	3	...	...	4	2	...	6	...	...	...	...	...	15
	No material improvement	2	7	...	2	1	...	1	5	...	...	...	...	18
	Died in Institution	3	...	1	...	1	...	...	...	...	...	...	...	5

In addition 11 cases were admitted for observation purposes, and 7 of these were diagnosed as Tubercular.

Non-Pulmonary Tuberculosis.

Bones and Joints :—	Quiescent or Arrested	7
	Improved	8
	No Improvement	2
Abdominal :—	Quiescent or Arrested	4
	Improved	3
	No Improvement	1
Other Organs :—	Quiescent or Arrested	1
	No Improvement	1
Peripheral Glands :—	Quiescent or Arrested	3
	Improved	2
		32

Note.—Cases transferred to other Institutions not counted as discharges.

T.B. 4. TUBERCULOSIS (Pulmonary and Other).

Year.	Number of Notifications.			Number of Deaths.			Death Rate.		
	Urban	Rural	Whole County.	Urban	Rural	Whole County.	Urban	Rural	Whole County.
1923	Lungs	185	161	346	85	120	205	0.76	0.77
	Other	38	46	84	13	27	40	0.12	0.17
1924	Lungs	144	159	303	90	130	220	0.79	0.81
	Other	34	46	80	27	28	55	0.24	0.18
1925	Lungs	188	203	391	106	111	217	0.93	0.69
	Other	32	65	97	33	24	57	0.29	0.15
1926	Lungs	155	193	348	79	117	196	0.68	0.71
	Other	42	47	89	21	31	52	0.18	0.19
1927	Lungs	179	216	395	82	123	205	0.69	0.74
	Other	49	52	101	30	40	70	0.25	0.24
Average for above 5 years.	Lungs	170	186	356	88	120	208	0.77	0.74
	Other	39	51	90	25	30	55	0.22	0.18
1928	Lungs	167	183	350	78	126	203	0.65	0.73
	Other	57	60	117	26	28	54	0.22	0.16

T.B. 5. TUBERCULOSIS:—Notifications and Deaths.
Shewing Age Periods.

AGE PERIODS.	NEW CASES.				DEATHS. *			
	Pulmonary.		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
0 to 1	...	1	...	...	3	1	...	1
1 to 5	...	1	1	13	10	1	...	8
5 to 15	...	16	6	26	4	17	1	6
15 to 25	...	47	8	64	16	17	1	34
25 to 45	...	69	14	78	14	7	2	47
45 to 65	...	27	6	23	4	2	1	17
65 and upwards	...	4	3	—	1	1	2	3
Total	...	165	37	185	40	66	8	117
					51	7	96	28
							117	26

NOTE.—The figures in small type show additional cases which came to the notice of the County M.O.H. other than by notification.

* 34 of the Deaths were of non-notified cases.

NOTIFICATIONS OF TUBERCULOSIS.

District.	Estimated Population.	DEATHS FROM TUBERCULOSIS.				DEATHS FROM TUBERCULOSIS.			
		Pulmonary.	Attack Rate	Non-Pulmonary.	Attack Rate	Pulmonary.	Death Rate.	Non-Pulmonary.	Death Rate.
Ashby-de-la-Zouch	5,248	5	.95	4	.76	1	.19	1	.19
Ashby Woulds	3,544	3	.85	2	.56	4	.52	1	.28
Coalville	22,970	30	1.31	12	.52	12	.58	..	..
Hinckley	15,430	28	1.81	12	.78	9	.7	7	.46
Loughborough	25,950	41	1.58	8	.31	16	.62	6	.23
Market Harborough	9,002	9	1.00	5	.56	7	.78	4	.44
Market Melton Mowbray	10,550	20	1.90	6	.57	11	1.04	1	.09
Oadby	4,247	7	1.65	..	..	3	.71	..	..
Quorn	2,619	..	..	..	..	1	.38	..	..
Shepshed	5,931	5	.84	2	.34	3	.51	1	.17
Thurmaston	3,739	5	1.34	1	.27	4	1.07	..	..
Wigston Magna	10,700	14	1.31	5	.47	7	.65	5	.47
TOTALS.	119,930	167	1.39	57	.48	78	.65	26	.22
Ashby-de-la-Zouch	17,710	17	.96	14	.79	11	.62	6	.34
Barrow-on-Soar	29,300	43	1.47	8	.27	28	.96	1	.03
Belvoir	3,238	2	.62	..	..	3	.93	..	..
Billesdon	10,270	3	.29	1	.10	2	.19	..	..
Blaby	25,160	32	1.27	11	.44	24	.95	4	.16
Castle Donington	6,538	9	1.38	1	.15	8	1.22	2	.31
Hallaton	1,715	3	1.75	..	..	3	1.76	..	..
Hinckley	16,500	17	1.03	8	.48	9	.55	2	.12
Loughborough	4,774	3	.63	3	.63	2	.42	2	.42
Lutterworth	10,330	10	.97	2	.19	9	.87	3	.29
Market Bosworth	24,150	25	1.03	7	.29	14	.58	6	.26
Market Harborough	7,465	13	1.74	..	..	7	.94	1	.13
Melton Mowbray	14,720	6	.41	5	.34	3	.20	1	.07
TOTALS.	171,870	183	1.06	60	.35	125	.73	28	.16

TABLE 1.

VITAL STATISTICS.

	LEICESTERSHIRE COUNTY, 1928.						ENGLAND AND WALES			
	Urban.		Rural.		Whole County.					
	No.	Rate.	No.	Rate.	No.	Rate.				
Population	119,930		171,870		291,800		—			
Births	2048	17.01	3026	17.6	5074	17.4	16.7			
Deaths (all causes and all ages)	1186	9.88	1873	10.89	3059	10.48	11.7			
" (under one year)	112	*.55	169	*.56	281	*.55	*.65			
" (total Zymotic)	23	0.19	46	0.27	69	0.23	0.45			
Deaths from—										
Small Pox .. .. ..	...	...	...	...	...	...	...
Measles	4	0.03	11	0.06	15	0.05	0.11			
Whooping Cough	1	0.01	4	0.02	5	0.02	0.07			
Diphtheria	10	0.08	14	0.08	24	0.08	0.06			
Scarlet Fever .. .. ..	...	...	3	0.02	3	0.01	0.01	
†Diarrhoea (under 2 years)	8	*3.91	13	*4.28	21	*4.14	*7.0			
Enteric Fever .. .. ..	...	...	1	0.006	1	0.003	0.01	
The seven principal Zymotic Diseases of Death were:	Percentage of Total Deaths.									
	Urban.		Rural.		Whole County					
	Heart Disease	199	1.66	299	1.74	498	1.71	16.8	16.0	16.3
	Cancer	130	1.08	225	1.31	355	1.68	11.0	12.0	11.6
	Phthisis	78	0.65	125	0.73	203	0.70	6.6	6.7	6.6
	Cerebral Haemorrhage	74	0.62	118	0.69	192	0.66	6.2	6.3	6.3
	Arterio Sclerosis	53	0.44	116	0.67	169	0.58	4.5	6.2	5.5
Bronchitis		66	0.55	77	0.48	143	0.49	5.6	4.1	4.7
Congenital Debility		59	0.49	75	0.44	134	0.46	5.0	4.0	4.1

NOTES.—*The Rates are calculated per thousand of the population except where marked (*) which are per thousand registered births.

† The Diarrhoea rates per thousand of the population are:—
Urban 0.06, Rural 0.08, Whole County 0.07.

TABLE 2.
Birth-rate, Death-rate, and Analysis of Mortality during the year 1928.

Provisional Figures. The Rates for England and Wales have been calculated on a population estimated to the middle of 1928, but those for the towns have been calculated on populations estimated to the middle of 1927. The mortality rates refer to the whole population as regards England and Wales, but only to civilians as regards London and the groups of towns.)

RATE PER 1,000 TOTAL POPULA- TION.	ANNUAL DEATH-RATE PER 1,000 POPULATION.		RATE PER 1,000 BIRTHS.		PERCENTAGE OF TOTAL DEATHS	
	All Causes.	Still- Births	Live Births	Still- Births	Total Deaths under One Year.	Causes after P.M.
England and Wales	11.7	0.70	11.7	0.01	0.00	0.11
County Boroughs and Great towns, including London	11.6	0.70	11.6	0.01	0.00	0.15
115* Smaller Towns (1921 Adjusted Populations 20,000—50,000)	10.6	0.73	10.6	0.01	0.00	0.08
London	11.6	0.53	11.6	0.01	0.00	0.30

By the Union of Morecambe M. B. and Heysham U.D. on the 1st October 1928, the number of smaller Towns is increased to 156.

Table 3.
The Seven Chief Causes of Death.

Disease.	URBAN.				RURAL.				WHOLE COUNTY.			
	1928		Previous Quinquennial Average		1928		Previous Quinquennial Average		1928		Previous Quinquennial Average	
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Heart Disease ...	832	13.0	199	16.8	1252	13.8	299	16.0	2084	13.5	498	16.3
Cancer ...	725	11.3	130	11.0	999	11.0	225	12.0	1724	11.1	355	11.6
Phthisis ...	442	6.9	78	6.6	601	6.6	125	6.7	1043	6.7	203	6.6
Cerebral Hæmorrhage	462	7.2	74	6.2	623	6.8	118	6.3	1085	7.0	192	6.3
Arterio Sclerosis	188	2.9	53	4.5	324	3.6	116	6.2	512	3.3	169	5.5
Bronchitis	425	6.7	66	5.6	523	5.7	77	4.1	948	6.1	143	4.7
Congenital Debility ...	338	5.2	59	5.0	412	4.5	75	4.0	747	4.8	134	4.4

TABLE 4. NOTIFIABLE DISEASES.

DISEASE.	Total Cases Notified.	Cases Admitted to Hospital.	Total Deaths.
*Small Pox	25	25	0
*Scarlet Fever	1226	836	3
*Diphtheria	395	330	24
*Enteric Fever (including para-typhoid)	14	11	1
*Puerperal Fever	11	6	12
Dysentry	3	...	...
Pneumonia	292	...	126
Other Diseases generally notifiable :—			
Tuberculosis (Lungs)	350	...	203
,, (Other)	117	...	54
*Erysipelas	118	1	...
Poliomyelitis	5	1	1
Ophthalmia Neonatorum	18	2	...
Encephalitis Lethargica	8	0	5
Malaria	6	...	...
*Puerperal Pyrexia	27	12	...
Cerebro-Spinal Fever	1	...	...
Polio-encephalitis	1	0	1
Other Diseases notifiable locally :—			
Chicken Pox	129	0	...

* Figures supplied by the Registrar General.

TABLE 5.

TABLE 5.
Causes of Death at Different Periods of Life in the Administrative County of Leicester, 1928
ACCRAIGATE OF RURAL DISTRICTS

1928. CAUSES OF DEATH IN ADMINISTRATIVE AREAS.

Causes of Death.	Loughborough M.B.	Ashby-de-la-Zouch U.D.	Ashby Woulds U.D.	Coalville U.D.	Hinckley U.D.	Market Harborough U.D.	Melton Mowbray U.D.	Quorndon U.D.	Shepshed U.D.	Thurmaston U.D.	Wigston Magna U.D.	Oadby U.D.	Ashby-de-la-Zouch R.D.	Barrow-upon-Soar R.D.	Belvoir R.D.	Billesdon R.D.	Blaby R.D.	Castle Donington R.D.	Hallaton R.D.	Hinckley R.D.	Loughborough R.D.	Lutterworth R.D.	Market Bosworth R.D.	Market Harborough R.D.	Melton Mowbray R.D.	Totals J.D.'s	Totals R.D.'s	Totals V.H.C. County												
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.												
Civilians only.																																								
ALL CAUSES.	161	130	20	20	16	14	104	93	81	62	42	43	20	11	28	27	23	12	53	57	25	12	78	121	156	160	10	19	50	33	125	119	49	5	7	81	41	54	64	309
1 Enteric Fever	1	1	1				
2 Small-pox	...	...	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
3 Measles	...	...	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
4 Scarlet fever	...	...	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
5 Whooping cough	...	...	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
6 Diphtheria	...	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
7 Influenza	...	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
8 Encephalitis lethargica	...	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
9 Meningococcal meningitis	...	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
10 Tuberculosis of respiratory system	7	0	1	4	7	5	5	4	3	4	8	3	1	3	1	4	3	2	1	1	10	14	14	1	2	1	1	9	15	4	2	48	30	48	77	203				
11 Other tuberculous diseases	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1					
12 Cancer, malignant disease	20	12	5	5	1	3	5	13	3	5	9	10	3	9	3	2	3	4	2	5	7	2	2	10	9	12	10	2	2	9	8	18	14	11	13	15	54			
13 Rheumatic fever	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
14 Diabetes	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
15 Cerebral haemorrhage, &c.	10	8	2	3	1	1	4	10	2	7	4	4	2	4	1	1	1	1	1	6	3	1	3	8	12	7	2	3	2	1	1	1	1	1	1	1				
16 Heart Disease	16	25	6	7	1	3	21	16	17	10	3	10	0	10	5	6	6	3	1	0	2	3	13	24	24	5	6	11	1	1	1	1	1	1	1	1	1	1		
17 Arterio-sclerosis	12	4	1	1	2	2	7	5	6	5	2	3	4	2	1	1	2	1	1	2	4	7	12	6	3	3	2	1	1	1	1	1	1	1	1					
18 Bronchitis	9	9	1	1	2	2	7	5	6	5	2	3	4	2	1	1	4	4	1	4	6	4	10	5	1	1	1	1	1	1	1	1	1	1	1					
19 Pneumonia (all forms)	4	2	1	1	1	1	4	1	1	1	5	2	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
20 Other respiratory diseases	3	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
21 Ulcer of stomach or duodenum	4	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
22 Diarrhoea, &c. (under 2 yrs.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
23 Appendicitis and typhilitis	2	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
24 Cirrhosis of liver	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
25 Acute and chronic nephritis	8	3	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
26 Puerperal sepsis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
27 Other accidents of parturition	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
28 Congenital debility and malformation, premature birth	7	6	1	3	2	1	5	5	1	4	2	2	2																											

